



947926

December 14, 2018

Reference No. 038443-330

Ms. Leslie Patterson  
Remedial Project Manager  
United States Environmental Protection Agency  
Region V  
77 West Jackson Boulevard  
Mail Code SR-6J  
Chicago, Illinois  
60604

Ms. Tamara McPeek  
Environmental Response and Revitalization  
Ohio Environmental Protection Agency  
Southwest District Office  
401 East Fifth Street  
Dayton, Ohio  
45402

Dear Ms. Patterson and Ms. McPeek:

**Re: Phase 1 Soil Gas Investigation Activities and Results  
South Dayton Dump and Landfill Site, Moraine, Ohio (Site)**

This letter provides a summary and discussion of results from the Phase 1 soil gas investigation activities conducted at the South Dayton Dump and Landfill Site (Site) and vicinity, from January to November 2018. This letter is submitted as an interim deliverable for the purpose of providing the results of field monitoring and sampling of existing and new soil gas probes, pending completion of the remaining RI field sampling activities. GHD has prepared this letter on behalf of the Respondents to the Administrative Settlement Agreement and Order on Consent (ASAOC) for Remedial Investigation/Feasibility Study (RI/FS) of the Site, Docket No. V-W-16-C-011 (Respondents).

***Soil Gas Probe Installation***

GHD proposed installation of 18 soil gas probes in the Remedial Investigation/Feasibility Study (RI/FS) Work Plan for Operable Units 1 and 2 (RI/FS Work Plan), including 12 new soil gas probes and 6 soil gas probes reinstalled at existing locations to depths greater than 5 feet below ground surface (BGS).

A total of 10 new soil gas probe installations were completed from January to August 2018 as described in the RI/FS Work Plan. In addition, four gas probes were re-installed at existing locations. The 14 completed gas probe locations (shown on Figure 1) include, in sequence, the following:

- Soil gas probe GP32-18 was installed on January 10, 2018
- Soil gas probe GP30-18 was installed on January 17, 2018

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**GHD**

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ISO 9001  
ENGINEERING DESIGN



- Soil gas probe GP33-18 was installed on January 23, 2018
- Existing soil gas probes GP19-09 and GP20-09 were abandoned and reinstalled at deeper depths as GP19-18 and GP20-18 on January 24, 2018
- Soil gas probe GP31-18 was installed on January 25, 2018
- Soil gas probe GP25-18 was installed on January 29, 2018
- Soil gas probe GP01-18 was installed on January 29, 2018, at an offset location to replace GP01-09
- Soil gas probes GP26-18 and GP28-18 were installed on January 31, 2018
- Soil gas probes GP27-18 and GP29-18 were installed on February 1, 2018
- Soil gas probe GP34-18 was installed on July 31, 2018
- Soil gas probe GP07-09 could not be located and was re-installed as GP07-18 on August 1, 2018 (in addition to the probes identified in the RI/FS Work Plan)

The soil gas probes proposed in the RI/FS Work Plan that remain to be completed include two locations at **non responsive** pending Site access. Three soil gas probes that were proposed to be reinstalled at depths greater than 5 feet BGS were not completed. Two of these locations (GP17-09 and GP18-09) at Valley Asphalt property are inaccessible due to ongoing operations at Valley Asphalt. These soil gas probes were originally installed to monitor conditions near two structures that have been demolished by Valley Asphalt, and they are therefore no longer required for that purpose. GHD attempted to reinstall existing soil gas probe GP03-09 (located on the central portion of the Site in Parcel 5177) at a depth greater than 5 feet BGS; however, this was not completed because the water table was present at a depth of 6.0 feet BGS. The soil gas probe locations completed to date and the two remaining proposed locations per the RI/FS Work Plan are shown on Figure 1. A summary of the soil gas probe completion details are provided in Table 1.

For each new and replacement soil gas probe, drilling and installation was completed using direct push technology, with GHD oversight. The soil core retrieved from each location was logged to determine stratigraphy to the required depth, approximately 20 feet BGS, and was used to establish the soil gas probe screen interval. The stratigraphic and instrumentation logs for each soil gas probe location are included listed above are included in Attachment 1.

In accordance with the RI/FS Work Plan, GHD collected 14 soil samples from the gas probe borings (at the screen depth) and submitted to TestAmerica Laboratories in North Canton, Ohio Test for laboratory analysis of volatile organic compounds (VOCs), fraction of organic carbon (Foc) and grain size sieve analysis. Validated analytical results for VOCs and physical testing parameters are summarized in Table 2.

VOCs were detected in soil samples collected from each of the 14 soil gas probe locations. Collectively, the detected VOCs include benzene, toluene, ethylbenzene, xylenes, vinyl chloride,



cis-1,2-dichloroethene, trichloroethene, tetrachloroethene, 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 2-butanone, acetone, carbon disulfide, chlorobenzene, isopropyl benzene, methyl acetate, and methyl cyclohexane. The total detected VOC concentrations at 12 of 14 borings were less than 10 mg/kg. The total detected VOC concentrations at the other two borings were 100 mg/kg at GP01-18 (at Valley Asphalt property) and 3,335 mg/kg at GP28-18 (in the central portion of the Site).

#### ***Field Parameter Monitoring***

Field parameter monitoring for organic vapors, carbon dioxide, oxygen, methane, hydrogen sulfide, and explosive gases/lower explosive limit were completed in three monitoring rounds in 2018, as described in the RI/FS Work Plan. Field monitoring includes all accessible soil gas probes installed by GHD. The monitoring program identified in the RI/FS Work Plan also includes USEPA soil gas probes at six locations, identified as GP-1 and GP-3 through GP-7<sup>1</sup>. These locations include multi-level probes, totaling 17 discrete gas probe screen intervals.

The field parameter monitoring rounds are described below:

#### ***Round 1 – March 2018***

- Field parameter monitoring was completed at 28 GHD soil gas probes and 12 USEPA soil gas probes on March 21, 2018.
- Four soil gas probes (GP06-09, GP07-09, GP08-09, and USEPA GP-7) were inaccessible due to the presence of snow, vegetation, or stockpiled debris, and one soil gas probe (GP21-09) had insufficient gas flow. Two soil gas probes (GP17-09 and GP18-09) located on Valley Asphalt property were excluded since they are inaccessible, and were constructed to a depth less than 5 feet BGS.
- The results of the March 2018 soil gas field parameter monitoring round are provided in Attachment 2 - Table 1.

#### ***Round 2 – August/September 2018***

- Field parameter monitoring was completed at 32 GHD soil gas probes and 9 USEPA soil gas probes on August 24, 2018.
- Pressure readings were completed at 33 GHD soil gas probe locations and 15 USEPA soil gas probes from September 4 to September 6, 2018. Supplementary field monitoring was completed at 8 GHD soil gas probe locations and 5 USEPA soil gas probes from September 4 to September 6, 2018 including field filtered methane monitoring to confirm the unfiltered methane monitoring readings from August 24, 2018.

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<sup>1</sup> One USEPA soil gas probe location (GP-2) located adjacent to the DP&L transportation building and former UST area was not included in the field monitoring program based on USEPA approval of GHD's Technical Report: GP-2 Methane Monitoring Summary & Assessment, South Dayton Dump and Landfill Site and Revision 1, Addendum 2 of the VI Mitigation Work Plan, provided on December 12, 2016.



- One soil gas probe (GP08-09) had insufficient gas flow and was not monitored. Two GHD soil gas probes (GP17-09 and GP18-09) located on Valley Asphalt property were not included for the same reasons noted above for the first monitoring round.
- The results of the October/September 2018 soil gas field parameter monitoring round are provided in Attachment 2 - Tables 2a and 2b.

#### ***Round 3 – November 2018***

- Field parameter monitoring was completed at 30 GHD soil gas probes and 12 USEPA soil gas probes on November 12 to November 14, 2018.
- Two soil gas probes (GP09-09 and USEPA GP-6) were inaccessible due to the presence of vegetation or stockpiled debris and four soil gas probes (GP03-09, GP08-09, USEPA GP-1 (south), and USEPA GP-3 (southeast)) had insufficient gas flow and were not monitored. Two GHD soil gas probes (GP17-09 and GP18-09) located on Valley Asphalt property were not included for the same reasons noted above for the first and second monitoring round.
- The results of the November 2018 soil gas field parameter monitoring round are provided in Attachment 2 - Table 3.

GHD conducted a review of previous and current field monitoring results for methane. Figures 2 and 3 illustrate monitoring results for methane readings (unfiltered and filtered) from 2009 through 2016, and from 2018, respectively. Each figure shows monitoring results for locations where methane readings were greater than the lower explosive limit (5%), on at least one occasion. As shown on Figure 2, the pre-2018 results indicate presence of methane at six on-site soil gas probes, and one off-site soil gas probe<sup>2</sup> (GP-2) exceeding the 5% threshold. The 2018 results shown on Figure 3 indicate the presence of methane exceeding 5% at three locations within the northern and central portions of the Site, including GP01-18 (at Valley Asphalt property), GP02-09 and GP28-18 (both located in the central portion of the site). Methane was not detected above the 5% threshold at any of the remaining soil gas probe locations, with the exception of GP07-18 (at Jim City property). At GP07-18 a significant difference between the unfiltered and filtered results was identified, and the filtered results are well below the 5% threshold for methane. This finding indicates that the instrument readings for methane are affected by the presence of other substances, and methane is not present above the 5% threshold, at GP07-18.

Field parameter monitoring for organic vapors, carbon dioxide, oxygen, and hydrogen sulfide completed in three monitoring rounds in 2018 are summarized below:

- Organic vapor readings, measured using a photoionization detector (PID), were typically less than 25 ppm during all three rounds. The greatest readings were recorded at GP07-18 located at Jim City property (up to 205 ppm, in August/September 2018).

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<sup>2</sup> The off-site location (GP-2) is situated adjacent to the Dayton Power & Light facility. The soil gas impacts measured at GP-2 were determined to be unrelated to the SDD Site. See GHD's Technical Report: GP-2 Methane Monitoring Summary & Assessment, South Dayton Dump and Landfill Site, provided on December 12, 2016.



- Carbon dioxide levels ranged from 0 to 16.4%, and oxygen levels ranged from 0 to 21.4%.
- Hydrogen sulfide was detected at 8 soil gas probe locations in the August/September monitoring round (max of 8 ppm at GP02-09), and at 5 soil gas probe locations in the November 2018 monitoring round (max of 4.3 ppm at USEPA GP-7[west]). Hydrogen sulfide was not detected during the March 2018 monitoring round.

#### ***Soil Gas Probe Sampling and Analysis***

GHD completed soil gas sampling from August 14 to August 24, 2018 using 32 GHD soil gas probes in accordance with RI/FS Work Plan procedures. GHD submitted 38 samples (including one trip blank, one ambient air sample, and 4 field duplicates), to TestAmerica Knoxville for VOC (TO-15) analysis. GHD did not collect a sample from one GHD soil gas probe (GP08-09) due to insufficient gas flow.

The validated analytical results are included in Tables 3 and 4, with screening criteria for commercial and residential land use, respectively. The analytical results indicate variable presence of VOCs, as indicated by the following. The locations that exhibit the greatest total detected VOC concentrations ( $>10 \text{ mg/m}^3$ ) are listed below:

- GP07-18, located at parcel 3753 (Jim City), total VOC = approx.  $7274 \text{ mg/m}^3$
- GP01-18 located at parcel 5054 (Valley Asphalt), total VOC = approx.  $127 \text{ mg/m}^3$
- GP31-18 located at parcel 5172 (Dryden Road, near building 12), total VOC = approx.  $29 \text{ mg/m}^3$
- GP27-18 located at parcel 5177 (central portion of site), total VOC = approx.  $26 \text{ mg/m}^3$
- GP16-09 located at parcel 5171 (Dryden Road, near building 9), total VOC = approx.  $11 \text{ mg/m}^3$

The total VOC concentrations at the remaining 27 soil gas samples are less than  $10 \text{ mg/m}^3$ , and 15 of the 27 locations have total VOC concentrations less than  $1 \text{ mg/m}^3$ . As indicated above, the locations with the greatest detected VOC concentrations include GP07-18 (Jim City) and GP01-18 (Valley Asphalt), and significantly lower concentrations were detected at the remaining locations. The spatial distribution of the VOC results is indicative of localized areas of soil gas impact at GP01-18 and GP07-18 potentially related to operations being conducted within the respective properties.

#### ***Comparison of Analytical Results to Screening Criteria***

As noted above, Tables 3 and 4 also include generic screening criteria for commercial land use and residential land use, respectively. The screening criteria include:

- USEPA sub-slab or exterior soil gas concentration Vapor Intrusion Screening Levels (VISLs) conservatively calculated at the lower of a target cancer risk of  $1 \times 10^{-6}$  and a hazard quotient (HQ) of 0.1.
- Ohio EPA response action levels and removal management levels, from the Ohio EPA Guidance Document titled "*Recommendations Regarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio*", dated August 2016.



As shown in Table 3, detected VOC concentrations exceeded the generic commercial criteria at the following locations:

- Valley Asphalt property: GP01-18 and GP32-18
- Dryden Road businesses:
  - GP16-09, GP19-18 and GP20-19 at parcel 5171 (B&G Equipment & Truck Repair)
  - GP15-09 and GP31-18 at parcel 5172 (tenants - S&J Precision, Overstreet Painting, NexGen Vending)
  - GP14-09 at parcel 5173 (tenant - Sim Trainer)
  - GP13-09 at parcel 5174 (tenant - Command Roofing)
  - GP12-09 and GP23-13 at parcel 5175 (tenant – D. Dickinson Construction)
- The undeveloped central portion of the site, being part of parcel 5177: GP03-09, GP26-18, GP27-18, GP28-18
- Southern portion of site:
  - GP07-18 at Jim City property
  - GP09-09 and GP10-09 at Ron Barnett property

The soil gas probes that were sampled and had no detections that exceeded the generic commercial criteria include: GP02-09, GP04-09, GP05-09, GP06-09, GP11-09, GP21-09, GP22-13, GP24A-13, GP24B-13, GP25-18, GP29-18, GP30-18, GP33-18 and GP34-18 (see Table 3).

In addition to the above locations, eight other locations had detected concentrations exceeding the generic residential criteria (see Table 4), i.e., 26 of 32 soil gas probe locations had detected concentrations exceeding the generic residential criteria. The soil gas probes that were sampled and had no detections that exceeded the generic residential criteria include: GP04-09, GP06-09, GP11-09, GP24B-13, GP30-18, and GP34-18.

### ***Discussion and Recommendations***

Based on current land use, commercial activities are conducted on various property parcels within OU1. Potential residential exposure within OU1 is limited to one location, i.e., the elevated mobile home structure located on parcel 4610 (Ron Barnett property, Building A, also referred to as Building 18), and the nearest soil gas probe is GP09-09. The soil gas sample collected in August 2018 from GP09-09 contained TCE at a concentration of 690 µg/m<sup>3</sup>, which exceeds the USEPA VISL and the Ohio action levels for commercial residential use. No other VOCs were detected at concentrations above commercial or residential screening criteria at GP09-09 in the August 2018 sample. The 2018 soil gas results at GP09-09 are lower than those detected in September 2009, i.e., TCE was detected at a concentration of 2,000 µg/m<sup>3</sup>. In 2009 Respondents and USEPA agreed that no further action was required for any of the residential and/or commercial buildings on parcel 4610. The results from the 2012 crawl space sampling at the mobile home structure (CRA, Vapor Intrusion Investigation Summary Report, December



2012) did not exceed the then-current indoor air criteria that were conservatively identified as the applicable criteria<sup>3</sup>, which supported the prior conclusions. GHD notes that Building 25 (Middleton Trucking, Parcel 3254), non responsive [REDACTED]

[REDACTED] The results of the evaluation in the 2012 VI study (CRA, Vapor Intrusion Investigation Summary Report, December 2012) using multiple lines of evidence led Respondents and USEPA to conclude that no further action was required for Buildings 25, non [REDACTED] (CRA, VI Mitigation Work Plan, May 2013). The decreasing concentrations in the 2018 sample results further supports the prior conclusions that no additional vapor intrusion investigations are necessary [REDACTED] n o n [REDACTED]

As noted above, other soil gas probe sample locations within areas of commercial land use in OU1 have detected VOC concentrations above screening criteria based on commercial land use, i.e., Valley Asphalt, Dryden Road businesses, and Jim City. Valley Asphalt has already implemented a VI mitigation program within their property, with USEPA oversight. The VI mitigation program implemented by the Respondents in 2013 addresses the Dryden Road business locations.

Jim City property was not included in the 2012 VI study conducted by the Respondents. The 2009 analytical results for GP07-09 did not indicate any exceedances of applicable criteria<sup>4</sup>, which included comparison to residential criteria. Landfill gas/soil vapor probe GP07-09 could not be located in 2018, and was replaced with GP07-18. Unlike GP07-09, the soil vapor sample from GP07-18 contained benzene, toluene, ethylbenzene, xylenes (BTEX), hexane, and n-heptane at concentrations greater than USEPA VISLs for sub-slab from commercial structures; these compounds/contaminants are related to fuels.

The 2018 results for GP07-18 (located on parcel 3753) identified detected concentrations of constituents above screening levels for multiple compounds; however, these appear to be unrelated to the SDD site. Specifically, the constituents that exceeded the screening criteria are petroleum hydrocarbons (i.e., fuels).. GHD confirmed with the property owner that the building adjacent to GP07-18 (located on parcel 3256) is used for equipment storage only.

Based on the above, GHD recommends the following:

- non responsive [REDACTED]  
[REDACTED]
- Regarding parcel 3753 (Jim City property), inform the property owner of the findings based on the 2018 soil gas sampling results
- Replace GP08-09 which appears to be unusable, and complete installation of proposed soil gas probes within East River Road properties subject to obtaining property access
- Complete the soil gas data assessment in accordance with the RI/FS Work Plan

<sup>3</sup> Vapor Intrusion Investigation Summary Report. CRA, December 2012 (38443 Report 17)

<sup>4</sup> "Results of the Landfill Gas/Soil Vapor Investigation", Conestoga-Rovers & Associates (CRA, now GHD), January 11, 2010 (038443Cibu-69)



Should you have any questions on the above, please do not hesitate to contact us.

Sincerely,

GHD

A handwritten signature in blue ink that reads "Julian Hayward". The signature is fluid and cursive, with "Julian" on the top line and "Hayward" on the bottom line.

Julian Hayward

JH/cb/5

Encl.

cc: (all by pdf)    Ken Brown, ITW  
                      Bryan Heath, NCR  
                      Wendell Barner, Barner Consulting  
                      Jim Campbell, EMI  
                      Brett Fishwild, Jacobs  
                      Valerie Chan, GHD

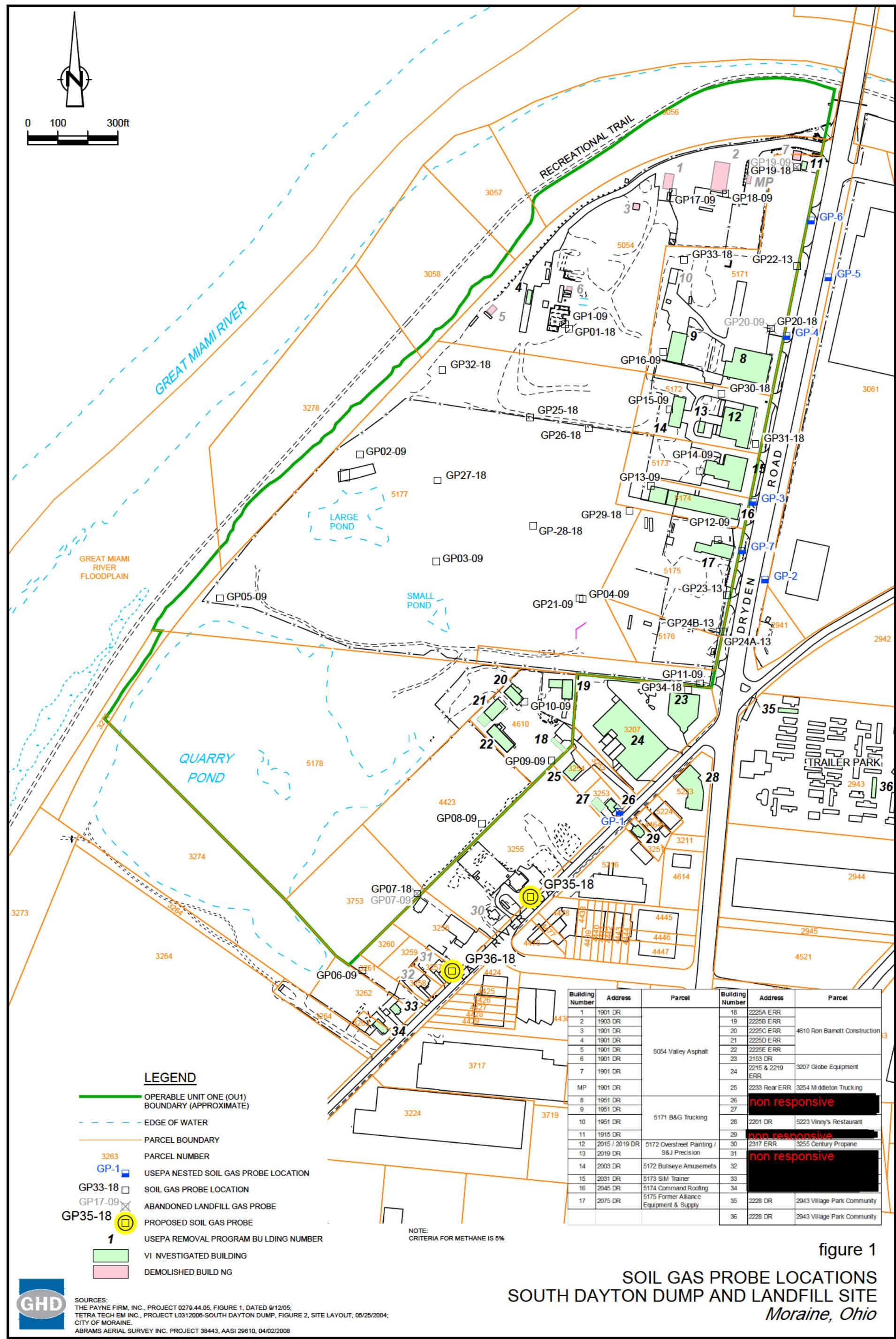
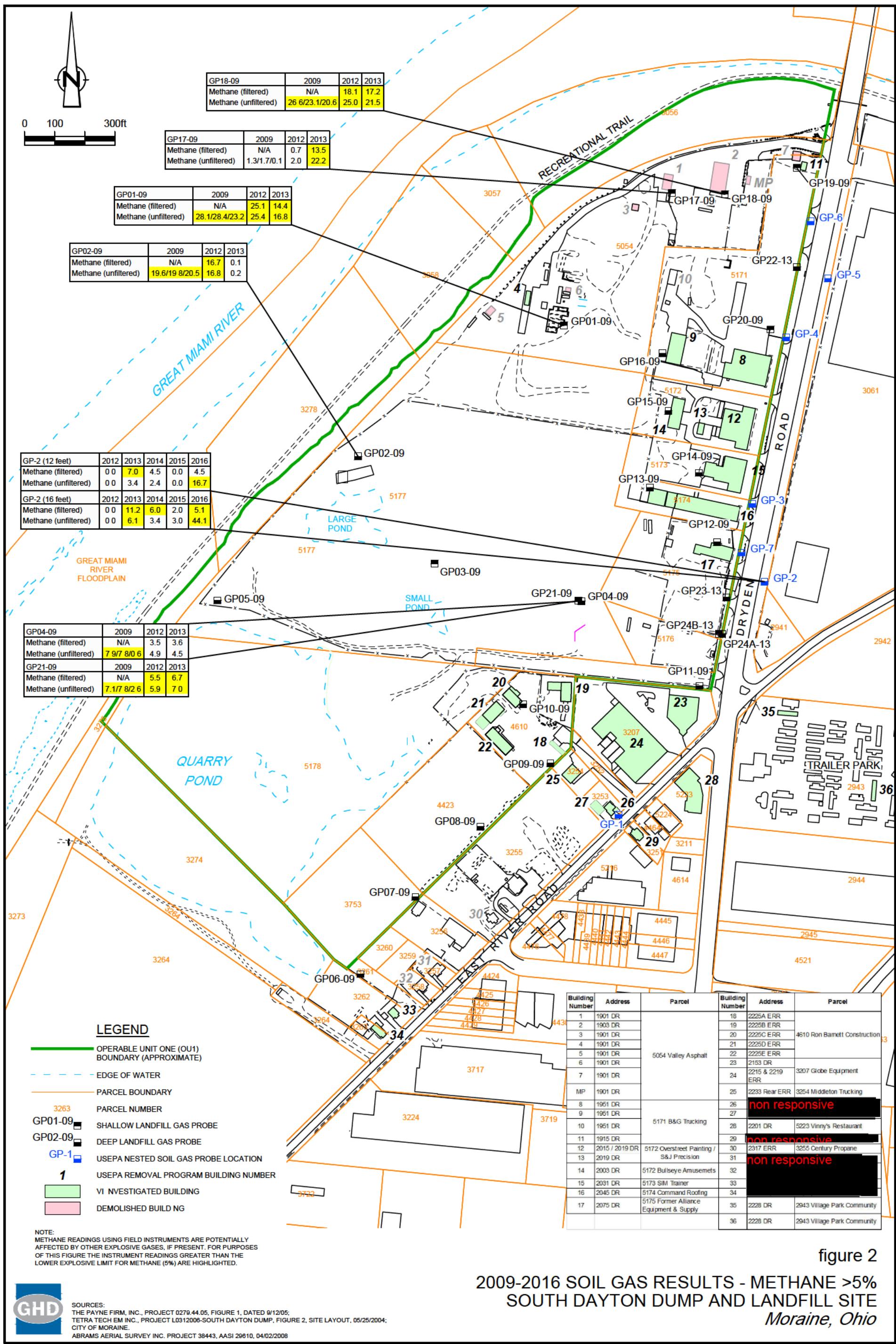


figure 1

**SOIL GAS PROBE LOCATIONS  
SOUTH DAYTON DUMP AND LANDFILL SITE  
*Moraine, Ohio***



SOURCES:  
THE PAYNE FIRM, INC., PROJECT 0279.44.05, FIGURE 1, DATED 9/12/05;  
TETRA TECH EM INC., PROJECT L0312006-SOUTH DAYTON DUMP, FIGURE 2, SITE LAYOUT, 05/25/2004;  
CITY OF MORaine.  
ABRAMS AERIAL SURVEY INC., PROJ ECT 38413, AASL 20610, 04/02/2008.



SOURCES:  
THE PAYNE FIRM, INC., PROJECT 0279.44.05, FIGURE 1, DATED 9/12/05;  
TETRA TECH EM INC., PROJECT L0312006-SOUTH DAYTON DUMP, FIGURE 2, SITE LAYOUT, 05/25/2004;  
CITY OF MORAIN.  
ABRAMS AERIAL SURVEY INC. PROJECT 38443, AASI 29610, 04/02/2008

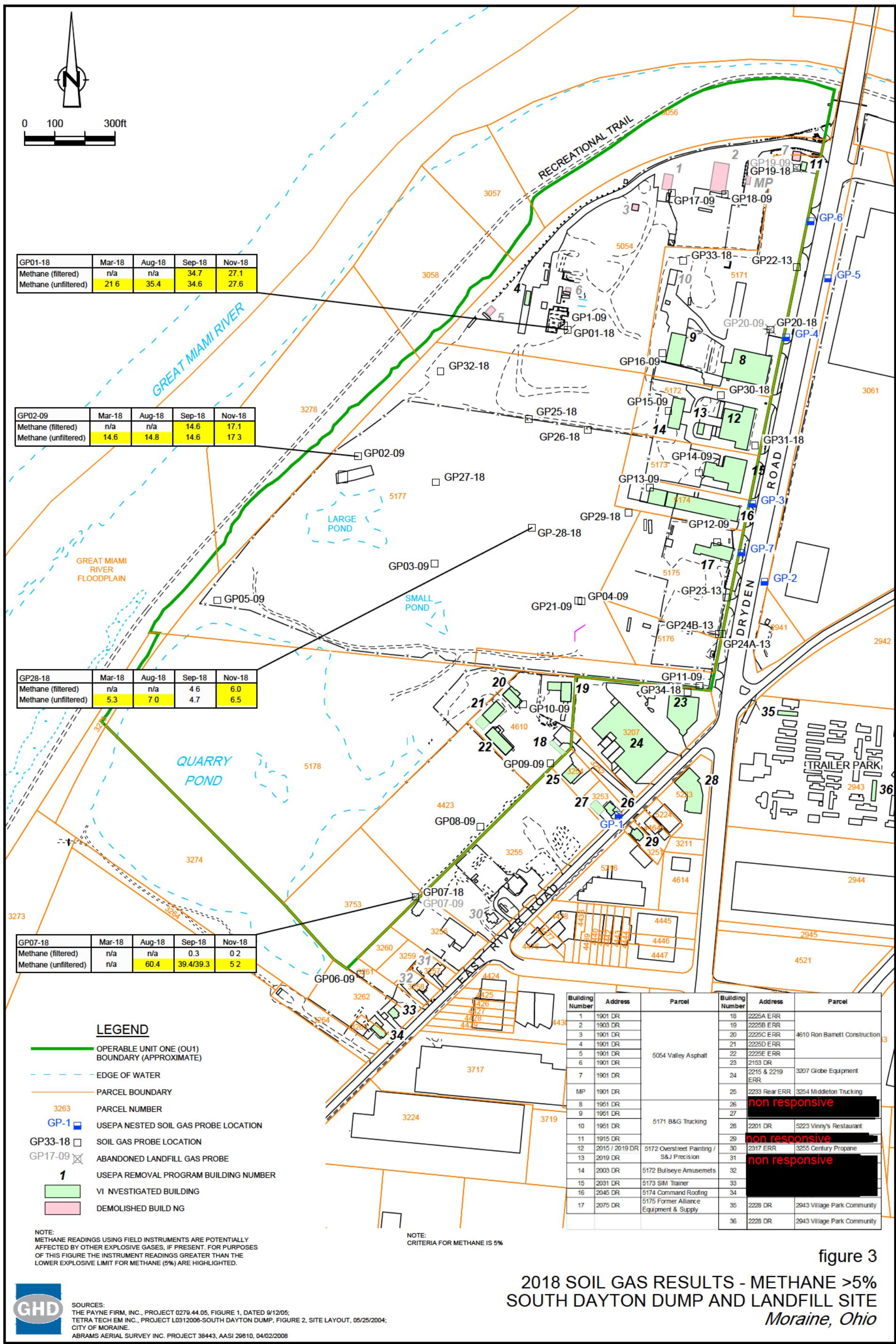


Table 1

**Investigative Location Completion Details**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Location Identification | Type      | Coordinates [1] |           | Elevation [2]<br>(ft AMSL) | Ground Surface    |     |        |         | Bottom of Hole Depth<br>ft bgs | Stratigraphy Description<br>of Screened Interval | Notes |                                 |                          |
|-------------------------|-----------|-----------------|-----------|----------------------------|-------------------|-----|--------|---------|--------------------------------|--|-------|---------------------------------|--------------------------|
|                         |           | Easting         | Northing  |                            | Screened Interval |     | ft bgs | ft AMSL |                                |  |       |                                 |                          |
| GP01-09                 | gas probe | 1484953.26      | 634114.42 | 736.47                     | 3                 | to  | 4      | 733.47  | to                             | 732.47   | 25    | 711.47                          |                          |
| GP01-18                 | gas probe | 1484966.01      | 634100.25 | 737.67                     | 6                 | to  | 7      | 731.67  | to                             | 730.67   | 20    | 717.67                          |                          |
| GP02-09                 | gas probe | 1484270.12      | 633680.04 | 723.81                     | 7                 | to  | 8      | 716.81  | to                             | 715.81   | 20    | 703.81                          |                          |
| GP03-09                 | gas probe | 1484523.78      | 633323.95 | 714.95                     | 4                 | to  | 5      | 710.95  | to                             | 709.95   | 15    | 699.95                          |                          |
| GP04-09                 | gas probe | 1485011.94      | 633199.83 | 727.42                     | 12                | to  | 13     | 715.42  | to                             | 714.42   | 20    | 707.42                          |                          |
| GP05-09                 | gas probe | 1483803.74      | 633202.65 | 725.84                     | 7                 | to  | 8      | 718.84  | to                             | 717.84   | 20    | 705.84                          |                          |
| GP06-09                 | gas probe | 1484278.34      | 631963.21 | 723.77                     | 9                 | to  | 10     | 714.77  | to                             | 713.77   | 20    | 703.77                          |                          |
| GP07-09                 | gas probe | 1484460.29      | 632219.37 | 723.03                     | 12                | to  | 13     | 711.03  | to                             | 710.03   | 20    | 703.03                          |                          |
| GP07-18                 | gas probe | 1484459.43      | 632213.10 | 723.86                     | 12                | to  | 13     | 711.86  | to                             | 710.86   | 16    | 707.86                          |                          |
| GP08-09                 | gas probe | 1484676.27      | 632452.15 | 723.40                     | 11.67             | to  | 12.67  | 711.73  | to                             | 710.73   | 20    | 703.40                          |                          |
| GP09-09                 | gas probe | 1484908.15      | 632662.47 | 728.64                     | 6.5               | to  | 7.5    | 722.14  | to                             | 721.14   | 20    | 708.64                          |                          |
| GP10-09                 | gas probe | 1484817.23      | 632858.08 | 730.49                     | 17                | to  | 18     | 713.49  | to                             | 712.49   | 25    | 705.49                          |                          |
| GP11-09                 | gas probe | 1485402.22      | 632919.18 | 730.48                     | 8                 | to  | 9      | 722.48  | to                             | 721.48   | 25    | 705.48                          |                          |
| GP12-09                 | gas probe | 1485461.15      | 633395.73 | 730.61                     | 5                 | to  | 6      | 725.61  | to                             | 724.61   | 25    | 705.61                          |                          |
| GP13-09                 | gas probe | 1485238.28      | 633576.29 | 730.94                     | 6                 | to  | 7      | 724.94  | to                             | 723.94   | 25    | 705.94                          |                          |
| GP14-09                 | gas probe | 1485401.19      | 633625.83 | 731.77                     | 5                 | to  | 6      | 726.77  | to                             | 725.77   | 25    | 706.77                          |                          |
| GP15-09                 | gas probe | 1485299.60      | 633831.22 | 733.75                     | 9                 | to  | 10     | 724.75  | to                             | 723.75   | 25    | 708.75                          |                          |
| GP16-09                 | gas probe | 1485279.60      | 634021.76 | 735.17                     | 7                 | to  | 8      | 728.17  | to                             | 727.17   | 25    | 710.17                          |                          |
| GP17-09                 | gas probe | 1485310.58      | 634552.85 | 737.92                     | 4                 | to  | 5      | 733.92  | to                             | 732.92   | 25    | 712.92                          |                          |
| GP18-09                 | gas probe | 1485487.25      | 634549.78 | 737.65                     | 3                 | to  | 4      | 734.65  | to                             | 733.65   | 25    | 712.65                          |                          |
| GP19-09                 | gas probe | 1485725.54      | 634637.49 | 734.23                     | 4                 | to  | 5      | 730.23  | to                             | 729.23   | 25    | 709.23                          |                          |
| GP19-18                 | gas probe | 1485725.98      | 634632.68 | 734.19                     | 11                | to  | 12     | 723.19  | to                             | 722.19   | 20    | 714.19                          |                          |
| GP20-09                 | gas probe | 1485638.89      | 634100.78 | 731.51                     | 4                 | to  | 5      | 727.51  | to                             | 726.51   | 25    | 706.51                          |                          |
| GP20-18                 | gas probe | 1485634.38      | 634103.24 | 731.84                     | 11                | to  | 12     | 720.84  | to                             | 719.84   | 20    | 711.84                          |                          |
| GP21-09                 | gas probe | 1485001.00      | 633201.06 | 727.43                     | 3                 | to  | 4      | 724.43  | to                             | 723.43   | 5     | 722.43                          |                          |
| GP22-13                 | gas probe | n/a             | n/a       | n/a                        | 19                | to  | 20     | n/a     | n/a                            | 20   | n/a   | silty, sand and gravel (native) |                          |
| GP23-13                 | gas probe | n/a             | n/a       | n/a                        | 17.5              | to  | 18.5   | n/a     | n/a                            | 20   | n/a   | sand and gravel (fill)          |                          |
| GP24A-13                | gas probe | n/a             | n/a       | n/a                        | n/a               | n/a | n/a    | n/a     | n/a                            | n/a  | n/a   | n/a                             |                          |
| GP24B-13                | gas probe | n/a             | n/a       | n/a                        | n/a               | n/a | n/a    | n/a     | n/a                            | n/a  | n/a   | n/a                             |                          |
| GP25-18                 | gas probe | 1484833.55      | 633800.05 | 733.12                     | 15                | to  | 16     | 718.12  | to                             | 717.12   | 20    | 713.12                          | sand (fill)              |
| GP26-18                 | gas probe | 1485025.84      | 633768.62 | 731.98                     | 13.4              | to  | 14.4   | 718.58  | to                             | 717.58   | 20    | 711.98                          | silty sand (fill)        |
| GP27-18                 | gas probe | 1484526.08      | 633585.18 | 723.89                     | 7                 | to  | 8      | 716.89  | to                             | 715.89   | 20    | 703.89                          | sand (fill)              |
| GP28-18                 | gas probe | 1484848.10      | 633443.03 | 724.44                     | 11                | to  | 12     | 713.44  | to                             | 712.44   | 20    | 704.44                          | n/a                      |
| GP29-18                 | gas probe | 1485165.16      | 633490.14 | 730.14                     | 9                 | to  | 10     | 721.14  | to                             | 720.14   | 18.5  | 711.64                          | silty sand (fill)        |
| GP30-18                 | gas probe | 1485470.09      | 633860.32 | 732.64                     | 10.5              | to  | 11.5   | 722.14  | to                             | 721.14   | 20    | 712.64                          | sand and gravel (native) |
| GP31-18                 | gas probe | 1485579.59      | 633710.41 | 731.77                     | 8                 | to  | 9      | 723.77  | to                             | 722.77   | 20    | 711.77                          | sand (native)            |
| GP32-18                 | gas probe | 1484514.28      | 633941.37 | 731.77                     | 10                | to  | 11     | 721.77  | to                             | 720.77   | 20    | 711.77                          | sand (fill)              |
| GP33-18                 | gas probe | 1485345.08      | 634328.34 | 736.94                     | 17.5              | to  | 18.5   | 719.44  | to                             | 718.44   | 20    | 716.94                          | sandy gravel (native)    |
| GP34-18                 | gas probe | 1485351.64      | 632901.71 | 730.93                     | 10                | to  | 11     | 720.93  | to                             | 719.93   | 24    | 706.93                          | sand and gravel (native) |

## Notes:

[1] - North American Datum of 1983 (NAD83), U.S. Survey feet

[2] - North American Vertical Datum of 1988 (NAVD88), U.S. Survey feet

N/A - Information not available.

mAMSL - metres above mean sea level.

mbgs - metres below ground surface.

Table 2

**Analytical Results Summary**  
**Soil Sampling**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location:                                     | GP01-18               | GP07-18                | GP19-18               | GP20-18               | GP25-18               | GP26-18               | GP27-18               | GP28-18               | GP29-18               | GP30-18               | GP31-18               | GP32-18               | GP33-18               | GP34-18                |        |
|--|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|--------|
| Sample ID:   | S-38443-012518-JC-064 | SO-38443-080118-JC-121 | S-38443-012418-JC-063 | S-38443-012218-JC-060 | S-38443-012918-JC-066 | S-38443-012918-JC-065 | S-38443-013018-JC-067 | S-38443-013018-JC-068 | S-38443-013018-JC-069 | S-38443-011718-JC-049 | S-38443-011918-JC-056 | S-38443-011018-JC-037 | S-38443-012218-JC-058 | SO-38443-073118-JC-120 |        |
| Sample Date:   | 1/25/2018             | 8/1/2018               | 1/24/2018             | 1/22/2018             | 1/29/2018             | 1/29/2018             | 1/30/2018             | 1/30/2018             | 1/30/2018             | 1/17/2018             | 1/19/2018             | 1/10/2018             | 1/22/2018             | 7/31/2018              |        |
| Sample Depth:  | 5.5-6.5 ft bgs        | 12-13 ft bgs           | 11-12 ft bgs          | 11-12 ft bgs          | 15-16 ft bgs          | 13.5-14.5 ft bgs      | 7-8 ft bgs            | 15-16 ft bgs          | 9-10 ft bgs           | 10.5-11.5 ft bgs      | 8-9 ft bgs            | 10-11 ft BGS          | 17.5-18.5 ft bgs      | 10-11 ft bgs           |        |
| Parameters   | Units                 |                        |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                        |        |
| <b>Volatiles</b>                                     |                       |                        |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                        |        |
| 1,1,1-Trichloroethane                                | µg/kg                 | 530 U                  | 26 U                  | 0.37 U                | 0.21 U                | 53 UJ                 | 0.25 U                | 41 U                  | 13000 U               | 0.23 UJ               | 0.20 U                | 0.22 UJ               | 0.30 U                | 0.20 U                 | 0.78 U |
| 1,1,2,2-Tetrachloroethane                            | µg/kg                 | 460 U                  | 22 U                  | 0.42 U                | 0.24 U                | 45 UJ                 | 0.29 U                | 35 U                  | 11000 U               | 0.26 U                | 0.23 U                | 0.25 U                | 0.34 U                | 0.23 U                 | 1.4 U  |
| 1,1,2-Trichloroethane                                | µg/kg                 | 440 U                  | 21 U                  | 0.64 U                | 0.36 U                | 43 UJ                 | 0.43 U                | 33 U                  | 11000 U               | 0.39 U                | 0.35 U                | 0.37 U                | 0.50 U                | 0.34 U                 | 1.1 U  |
| 1,1-Dichloroethane                                   | µg/kg                 | 590 U                  | 29 U                  | 0.54 U                | 0.30 U                | 58 UJ                 | 0.36 U                | 45 U                  | 15000 U               | 0.33 U                | 0.29 U                | 0.32 U                | 0.43 U                | 0.29 U                 | 0.66 U |
| 1,1-Dichloroethene                                   | µg/kg                 | 680 U                  | 33 U                  | 0.88 U                | 0.50 U                | 68 UJ                 | 0.60 U                | 52 U                  | 17000 U               | 0.54 U                | 0.48 U                | 0.52 U                | 0.70 U                | 0.47 U                 | 0.86 U |
| 1,2,4-Trichlorobenzene                               | µg/kg                 | 490 U                  | 24 U                  | 0.39 U                | 0.22 U                | 49 UJ                 | 0.98 J                | 38 U                  | 12000 U               | 0.24 U                | 0.21 U                | 0.23 U                | 0.31 U                | 0.21 U                 | 0.54 U |
| 1,2-Dibromo-3-chloropropane (DBCP)                   | µg/kg                 | 910 U                  | 44 U                  | 1.1 U                 | 0.63 U                | 90 UJ                 | 0.75 U                | 69 U                  | 23000 U               | 0.68 U                | 0.60 U                | 0.65 U                | 0.88 U                | 0.59 U                 | 3.4 U  |
| 1,2-Dibromoethane (Ethylene dibromide)               | µg/kg                 | 440 U                  | 21 U                  | 0.57 U                | 0.32 U                | 43 UJ                 | 0.39 U                | 33 U                  | 11000 U               | 0.35 U                | 0.31 U                | 0.34 U                | 0.45 U                | 0.31 U                 | 0.73 U |
| 1,2-Dichlorobenzene                                  | µg/kg                 | 340 U                  | 17 U                  | 0.36 U                | 0.20 U                | 34 UJ                 | 0.24 U                | 200 J                 | 8500 U                | 0.22 U                | 0.20 U                | 0.21 U                | 0.28 U                | 0.19 U                 | 1.1 U  |
| 1,2-Dichloroethane                                   | µg/kg                 | 570 U                  | 28 U                  | 0.47 U                | 0.27 U                | 56 UJ                 | 0.32 U                | 43 U                  | 14000 U               | 0.29 U                | 0.26 U                | 0.28 U                | 0.38 U                | 0.25 U                 | 0.73 U |
| 1,2-Dichloropropane                                  | µg/kg                 | 570 U                  | 28 U                  | 0.50 U                | 0.28 U                | 56 UJ                 | 0.34 U                | 43 U                  | 14000 U               | 0.31 U                | 0.27 U                | 0.30 U                | 0.40 U                | 0.27 U                 | 0.81 U |
| 1,3-Dichlorobenzene                                  | µg/kg                 | 720 U                  | 35 U                  | 0.47 U                | 0.27 U                | 71 UJ                 | 0.32 U                | 55 U                  | 18000 U               | 0.29 U                | 0.26 U                | 0.28 U                | 0.38 U                | 0.25 U                 | 0.78 U |
| 1,4-Dichlorobenzene                                  | µg/kg                 | 510 U                  | 25 U                  | 0.57 U                | 0.32 U                | 51 UJ                 | 0.39 U                | 2900                  | 13000 U               | 0.35 U                | 0.31 U                | 0.34 U                | 0.45 U                | 0.31 U                 | 0.84 U |
| 2-Butanone (Methyl ethyl ketone) (MEK)               | µg/kg                 | 950 U                  | 46 U                  | 2.1 U                 | 1.2 U                 | 94 UJ                 | 6.3 J                 | 270 J                 | 24000 U               | 1.1 U                 | 1.2 U                 | 1.6 U                 | 1.1 U                 | 1.1 U                  | 3.4 U  |
| 2-Hexanone   | µg/kg                 | 1600 U                 | 79 U                  | 0.94 U                | 0.53 U                | 160 UJ                | 0.64 U                | 120 U                 | 40000 U               | 0.58 U                | 0.51 U                | 0.56 U                | 0.75 U                | 0.51 U                 | 3.9 U  |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/kg                 | 760 U                  | 37 U                  | 1.4 U                 | 0.82 U                | 75 UJ                 | 0.98 U                | 58 U                  | 19000 U               | 0.88 U                | 0.79 U                | 0.85 U                | 1.2 U                 | 0.78 U                 | 3.5 U  |
| Acetone  | µg/kg                 | 1800 U                 | 130 U                 | 20 U                  | 2.8 U                 | 180 UJ                | 15 J                  | 880 J                 | 46000 U               | 44 U                  | 2.7 U                 | 8.3 U                 | 4.0 U                 | 2.7 U                  | 20 U   |
| Benzene  | µg/kg                 | 460 U                  | 22 U                  | 0.52 U                | 0.29 U                | 45 UJ                 | 0.35 U                | 35 U                  | 11000 U               | 0.36 J                | 0.43 J                | 0.31 U                | 0.41 U                | 0.28 U                 | 0.66 U |
| Bromodichloromethane                                 | µg/kg                 | 340 U                  | 17 U                  | 0.54 U                | 0.30 U                | 34 UJ                 | 0.36 U                | 26 U                  | 8500 U                | 0.33 U                | 0.29 U                | 0.32 U                | 0.43 U                | 0.29 U                 | 0.65 U |
| Bromoform  | µg/kg                 | 440 U                  | 21 U                  | 0.65 U                | 0.37 U                | 43 UJ                 | 0.44 U                | 33 U                  | 11000 U               | 0.40 U                | 0.35 U                | 0.38 U                | 0.52 U                | 0.35 U                 | 2.3 U  |
| Bromonethane (Methyl bromide)                        | µg/kg                 | 530 U                  | 26 U                  | 0.96 U                | 0.54 U                | 53 UJ                 | 0.65 U                | 41 U                  | 13000 U               | 0.59 U                | 0.52 U                | 0.57 U                | 0.76 U                | 0.51 U                 | 0.94 U |
| Carbon disulfide                                     | µg/kg                 | 340 U                  | 17 U                  | 1.3 J                 | 0.19 U                | 34 UJ                 | 0.23 U                | 26 U                  | 8500 U                | 0.21 U                | 0.19 U                | 0.20 U                | 0.27 U                | 0.18 U                 | 1.1 U  |
| Carbon tetrachloride                                 | µg/kg                 | 510 U                  | 25 U                  | 0.41 U                | 0.23 U                | 51 UJ                 | 0.28 U                | 39 U                  | 13000 U               | 0.25 U                | 0.22 U                | 0.24 U                | 0.32 U                | 0.22 U                 | 3.1 U  |
| Chlorobenzene  | µg/kg                 | 100000                 | 28 U                  | 0.54 U                | 0.30 U                | 2000 J                | 5.4 J                 | 1900                  | 14000 U               | 0.33 U                | 0.29 U                | 0.32 U                | 0.43 U                | 0.29 U                 | 0.87 U |
| Chloroethane   | µg/kg                 | 530 U                  | 26 U                  | 0.62 U                | 0.35 U                | 53 UJ                 | 0.42 U                | 41 U                  | 13000 U               | 0.38 U                | 0.34 U                | 0.36 U                | 0.49 U                | 0.33 U                 | 1.2 U  |
| Chloroform (Trichloromethane)                        | µg/kg                 | 460 U                  | 22 U                  | 0.37 U                | 0.21 U                | 45 UJ                 | 0.25 U                | 35 U                  | 11000 U               | 0.23 U                | 0.20 U                | 0.22 U                | 0.30 U                | 0.20 U                 | 0.75 U |
| Chloromethane (Methyl chloride)                      | µg/kg                 | 340 U                  | 17 U                  | 0.62 U                | 0.35 U                | 34 UJ                 | 0.42 U                | 26 U                  | 8500 U                | 0.38 U                | 0.34 U                | 0.36 U                | 0.49 U                | 0.33 U                 | 0.99 U |
| cis-1,2-Dichloroethene                               | µg/kg                 | 670 U                  | 32 U                  | 17                    | 1.8 J                 | 66 UJ                 | 0.31 U                | 51 U                  | 16000 U               | 0.88 J                | 0.25 U                | 0.27 U                | 0.36 U                | 0.24 U                 | 0.62 U |
| cis-1,3-Dichloropropene                              | µg/kg                 | 440 U                  | 21 U                  | 0.42 U                | 0.24 U                | 43 UJ                 | 0.29 U                | 33 U                  | 11000 U               | 0.26 U                | 0.23 U                | 0.25 U                | 0.34 U                | 0.23 U                 | 1.4 U  |
| Cyclohexane  | µg/kg                 | 570 U                  | 28 U                  | 0.34 U                | 0.19 U                | 56 UJ                 | 0.23 U                | 43 U                  | 14000 U               | 0.21 U                | 0.19 U                | 0.20 U                | 0.27 U                | 0.18 U                 | 1.3 U  |
| Dibromochloromethane                                 | µg/kg                 | 650 U                  | 31 U                  | 0.49 U                | 0.28 U                | 64 UJ                 | 0.33 U                | 49 U                  | 16000 U               | 0.30 U                | 0.27 U                | 0.29 U                | 0.39 U                | 0.26 U                 | 2.6 U  |
| Dichlorodifluoromethane (CFC-12)                     | µg/kg                 | 420 U                  | 20 U                  | 0.57 U                | 0.32 U                | 41 UJ                 | 0.39 U                | 32 U                  | 10000 U               | 0.35 UJ               | 0.31 U                | 0.34 U                | 0.45 U                | 0.31 U                 | 0.90 U |
| Ethylbenzene   | µg/kg                 | 670 U                  | 380                   | 0.44 U                | 0.25 U                | 66 UJ                 | 0.65 J                | 49 U                  | 16000 U               | 0.44 J                | 0.52 J                | 0.35 J                | 0.35 U                | 0.24 U                 | 1.0 U  |
| Isopropyl benzene                                    | µg/kg                 | 650 U                  | 140 J                 | 0.33 U                | 0.18 U                | 64 UJ                 | 0.65 J                | 49 U                  | 16000 U               | 1.4 J                 | 0.18 U                | 0.19 U                | 0.26 U                | 0.17 U                 | 0.79 U |
| Methyl acetate                                       | µg/kg                 | 1400 U                 | 69 U                  | 1.9 U                 | 1.1 U                 | 140 UJ                | 1.3 U                 | 260 J                 | 35000 U               | 1.2 U                 | 1.0 U                 | 1.1 U                 | 1.5 U                 | 1.0 U                  | 3.2 U  |

Table 3

**Analytical Results Summary and Commercial Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayon Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location                                      | GP01-18<br>SVA-38443-082418-GL-036<br>8/24/2018  | GP01-18<br>SVA-38443-082418-GL-037<br>8/24/2018               | GP02-09<br>SVA-38443-081518-GL-011<br>8/15/2018 | GP03-09<br>SVA-38443-081418-GL-004<br>8/14/2018 | GP04-09<br>SVA-38443-081418-GL-002<br>8/14/2018 | GP05-09<br>SVA-38443-081418-GL-003<br>8/14/2018 |     |                     |                     |        |         |        |         |        |
|--|--|---|---|---|---|---|-----|---------------------|---------------------|--------|---------|--------|---------|--------|
| Sample ID  |  |   |   |   |   |   |     |                     |                     |        |         |        |         |        |
| Sample Date  |  |   |   |   |   |   |     |                     |                     |        |         |        |         |        |
| Parameters   | USEPA <sup>1</sup><br>Subslab VISL<br>Commercial | Ohio EPA <sup>2</sup><br>Action Level<br>Commercial (8 hours) | Removal<br>Management Level<br>Commercial       |   |   |   |     |                     |                     |        |         |        |         |        |
|  | Units  | CAS#  | Max   | a   | b   | c   |     |                     |                     |        |         |        |         |        |
|  |  |   |   | d   | e   |   |     |                     |                     |        |         |        |         |        |
| <b>Volatiles</b>                                     |  |   |   |   |   |   |     |                     |                     |        |         |        |         |        |
| 1,1,1-Trichloroethane                                | µg/m³  | 71-55-6   | 33  | 73000   | -   | -   | -   | 32 U                | 34 U                | 2.2 U  | 33      | 2.1 J  | 2.4     |        |
| 1,1,2,2-Tetrachloroethane                            | µg/m³  | 79-34-5   | ND  | 7   | -   | -   | -   | 83 U                | 87 U                | 5.7 U  | 0.42 U  | 4.2 U  | 0.42 U  |        |
| 1,1,2-Trichloroethane                                | µg/m³  | 79-00-5   | ND  | 3   | -   | -   | -   | 58 U                | 61 U                | 4.0 U  | 0.29 U  | 2.9 U  | 0.29 U  |        |
| 1,1-Dichloroethane                                   | µg/m³  | 75-34-3   | 3200  | 256   | -   | -   | -   | 21 U                | 22 U                | 1.6 J  | 4.7     | 29     | 0.11 U  |        |
| 1,1-Dichloroethene                                   | µg/m³  | 75-35-4   | 24  | 2920  | -   | -   | -   | 27 U                | 28 U                | 1.8 U  | 0.13 U  | 1.3 U  | 0.13 U  |        |
| 1,2,4-Trichlorobenzene                               | µg/m³  | 120-82-1  | ND  | 29  | -   | -   | -   | 140 U               | 150 U               | 9.9 UJ | 0.73 UJ | 7.3 UJ | 0.73 UJ |        |
| 1,2,4-Trimethylbenzene                               | µg/m³  | 95-63-6   | 8400 J  | 876   | -   | -   | -   | 61 U                | 64 U                | 15     | 17      | 19     | 16      |        |
| 1,2-Dibromoethane (Ethylene dibromide)               | µg/m³  | 106-93-4  | ND  | 1   | -   | -   | -   | 67 U                | 70 U                | 4.6 U  | 0.34 U  | 3.4 U  | 0.34 U  |        |
| 1,2-Dichlorobenzene                                  | µg/m³  | 95-50-1   | ND  | 2920  | -   | -   | -   | 83 U                | 87 U                | 5.7 U  | 0.42 U  | 4.2 U  | 0.42 U  |        |
| 1,2-Dichloroethane                                   | µg/m³  | 107-06-2  | 1   | 16  | -   | -   | -   | 38 U                | 39 U                | 2.6 U  | 0.19 U  | 1.9 U  | 0.19 U  |        |
| 1,2-Dichloropropane                                  | µg/m³  | 78-87-5   | ND  | 58  | -   | -   | -   | 48 U                | 50 U                | 3.3 U  | 0.24 U  | 2.4 U  | 0.24 U  |        |
| 1,2-Dichlorotetrafluoroethane (CFC 114)              | µg/m³  | 76-14-2   | 310   | -   | -   | -   | -   | 110 J               | 120 J               | 310    | 0.22 U  | 2.2 U  | 0.22 J  |        |
| 1,3,5-Trimethylbenzene                               | µg/m³  | 108-67-8  | 52 J  | 876   | -   | -   | -   | 63 U                | 66 U                | 4.3 U  | 4.8     | 5.7 J  | 4.4     |        |
| 1,3-Butadiene  | µg/m³  | 106-99-0  | ND  | 14  | -   | -   | -   | 28 U                | 29 U                | 1.9 U  | 0.14 U  | 1.4 U  | 0.14 U  |        |
| 1,3-Dichlorobenzene                                  | µg/m³  | 541-73-1  | 6.9   | -   | -   | -   | -   | 77 U                | 81 U                | 5.3 U  | 0.39 U  | 3.9 U  | 0.39 U  |        |
| 1,3-Dichloropropene                                  | µg/m³  | 542-75-6  | ND  | 102   | -   | -   | -   | ND                  | ND                  | ND     | ND      | ND     | ND      |        |
| 1,4-Dichlorobenzene                                  | µg/m³  | 106-46-7  | 74 J  | 37  | -   | -   | -   | 76 U                | 80 U                | 5.2 U  | 0.38 U  | 3.8 U  | 0.38 U  |        |
| 1,4-Dioxane  | µg/m³  | 123-91-1  | 0.73 J  | 82  | -   | -   | -   | 57 U                | 60 U                | 3.9 U  | 0.29 U  | 2.9 U  | 0.29 U  |        |
| 2,2,4-Trimethylpentane                               | µg/m³  | 540-84-1  | 1800000   | -   | -   | -   | -   | 3500                | 3600                | 2.5 U  | 0.18 U  | 26     | 0.18 U  |        |
| 2-Butanone (Methyl ethyl ketone) (MEK)               | µg/m³  | 78-93-3   | 35 J  | 73000   | -   | -   | -   | 120 U               | 120 U               | 8.0 U  | 9.8     | 24 J   | 10      |        |
| 2-Chlorotoluene                                      | µg/m³  | 95-49-8   | 1.5 J   | -   | -   | -   | -   | 65 U                | 67 U                | 4.4 U  | 0.33 U  | 3.3 U  | 0.33 U  |        |
| 2-Hexanone   | µg/m³  | 591-78-6  | 8.9 J   | 438   | -   | -   | -   | 47 U                | 49 U                | 8.9 J  | 1.9 J   | 2.4 U  | 1.5 J   |        |
| 2-Phenylbutane (sec-Butylbenzene)                    | µg/m³  | 135-98-8  | 47 J  | -   | -   | -   | -   | 70 U                | 73 U                | 4.8 U  | 0.35 U  | 3.5 U  | 0.35 U  |        |
| 4-Ethyl toluene                                      | µg/m³  | 622-96-8  | 72 J  | -   | -   | -   | -   | 64 U                | 67 U                | 4.5 J  | 5.7     | 6.5 J  | 5.3     |        |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/m³  | 108-10-1  | 4.3   | 43800   | -   | -   | -   | 160 U               | 170 U               | 11 U   | 0.86 J  | 8.0 U  | 1.4 J   |        |
| Acetone  | µg/m³  | 67-64-1   | 460   | 451000  | -   | -   | -   | 660 U               | 690 U               | 58 J   | 100     | 460    | 78      |        |
| Allyl chloride                                       | µg/m³  | 107-05-1  | ND  | 15  | -   | -   | -   | 30 U                | 31 U                | 2.0 U  | 0.15 U  | 1.5 U  | 0.15 U  |        |
| Benzene  | µg/m³  | 71-43-2   | 110000  | 52  | -   | -   | -   | 2200 <sup>a</sup>   | 2100 <sup>a</sup>   | 9.6    | 0.57 J  | 3.0 J  | 0.41 J  |        |
| Benzyl chloride                                      | µg/m³  | 100-44-7  | ND  | 8   | -   | -   | -   | 80 U                | 84 U                | 5.5 U  | 0.40 U  | 4.0 U  | 0.40 U  |        |
| Bromodichloromethane                                 | µg/m³  | 75-27-4   | ND  | 11  | -   | -   | -   | 58 U                | 61 U                | 4.0 U  | 0.29 U  | 2.9 U  | 0.29 U  |        |
| Bromoform  | µg/m³  | 75-25-2   | ND  | 372   | -   | -   | -   | 98 U                | 100 U               | 6.7 U  | 0.50 U  | 5.0 U  | 0.50 U  |        |
| Bromomethane (Methyl bromide)                        | µg/m³  | 74-83-9   | 0.98 J  | 73  | -   | -   | -   | 25 U                | 26 U                | 1.7 U  | 0.35 J  | 1.2 U  | 0.19 J  |        |
| Butane   | µg/m³  | 106-97-8  | 8100  | -   | -   | -   | -   | 4000                | 3800                | 740    | 0.81 J  | 610    | 0.74 J  |        |
| Carbon disulfide                                     | µg/m³  | 75-15-0   | 270 J   | 10200   | -   | -   | -   | 58 J                | 54 J                | 15 J   | 26      | 66     | 15      |        |
| Carbon tetrachloride                                 | µg/m³  | 56-23-5   | 36  | 68  | -   | -   | 680 | 6800                | 47 U                | 49 U   | 3.3 U   | 0.24 U | 2.4 U   | 0.24 U |
| Chlorobenzene  | µg/m³  | 108-90-7  | 110000  | 730   | -   | -   | -   | 110000 <sup>a</sup> | 110000 <sup>a</sup> | 3.1 U  | 0.23 U  | 2.3 U  | 0.23 U  |        |
| Chlorodifluoromethane                                | µg/m³  | 75-45-6   | 580   | 730000  | -   | -   | -   | 580                 | 540                 | 470    | 0.52 J  | 32     | 1.1     |        |
| Chloroethane   | µg/m³  | 75-00-3   | 550   | 146000  | -   | -   | -   | 95 J                | 73 J                | 4.6 J  | 0.53    | 3.1 J  | 0.27 J  |        |
| Chloroform (Trichloromethane)                        | µg/m³  | 67-66-3   | 110 J   | 18  | -   | -   | 180 | 1800                | 37 U                | 38 U   | 2.5 U   | 18     | 1.9 U   | 0.19 U |
| Chloromethane (Methyl chloride)                      | µg/m³  | 74-87-3   | 3.5   | 1310  | -   | -   | -   | 65 U                | 68 U                | 4.5 U  | 1.2     | 3.3 U  | 0.45 J  |        |
| cis-1,2-Dichloroethene                               | µg/m³  | 156-59-2  | 1700  | -   | -   | -   | -   | 130 J               | 140 J               | 10 J   | 0.93    | 2.4 U  | 0.24 U  |        |
| cis-1,3-Dichloropropene                              | µg/m³  | 10061-01-5  | ND  | -   | -   | -   | -   | 67 U                | 69 U                | 4.6 U  | 0.34 U  | 3.4 U  | 0.34 U  |        |
| Cyclohexane  | µg/m³  | 110-82-7  | 230000  | 87600   | -   | -   | -   | 1800                | 1900                | 310    | 0.68 J  | 8.2 J  | 0.41 J  |        |
| Cymene (p-Isopropyltoluene)                          | µg/m³  | 99-87-6   | 0.46 J  | -   | -   | -   | -   | 62 U                | 65 U                | 4.3 U  | 0.46 J  | 3.1 U  | 0.44 J  |        |
| Dibromochloromethane                                 | µg/m³  | 124-48-1  | ND  | -   | -   | -   | -   | 71 U                | 74 U                | 4.9 U  | 0.36 U  | 3.6 U  | 0.36 U  |        |
| Dichlorodifluoromethane (CFC-12)                     | µg/m³  | 75-71-8   | 570   | 1460  | -   | -   | -   | 67 U                | 70 U                | 330    | 1.1     | 9.8    | 570     |        |
| Ethylbenzene   | µg/m³  | 100-41-4  | 140000  | 164   | -   | -   | -   | 500 <sup>a</sup>    | 500 <sup>a</sup>    | 4.2 J  | 3.2     | 24     | 2.9     |        |
| Hexachlorobutadiene                                  | µg/m³  | 87-68-3   | ND  | 19  | -   | -   | -   | 160 U               | 170 U               | 11 UU  | 0.83 UJ | 8.3 UJ | 0.83 UJ |        |

Table 3

**Analytical Results Summary and Commercial Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location                    | GP01-18<br>SVA-38443-082418-GL-036<br>8/24/2018  | GP01-18<br>SVA-38443-082418-GL-037<br>8/24/2018               | GP02-09<br>SVA-38443-081518-GL-011<br>8/15/2018 | GP03-09<br>SVA-38443-081418-GL-004<br>8/14/2018 | GP04-09<br>SVA-38443-081418-GL-002<br>8/14/2018 | GP05-09<br>SVA-38443-081418-GL-003<br>8/14/2018 |
|------------------------------------|--|---|---|---|---|---|
| Sample ID                          |  |   |   | Duplicate                                       |   |   |
| Sample Date                        |  |   |   |   |   |   |
| Parameters                         | USEPA <sup>1</sup><br>Subslab VISL<br>Commercial | Ohio EPA <sup>2</sup><br>Action Level<br>Commercial (8 hours) | Removal<br>Management Level<br>Commercial       |   |   |   |
|                                    | Units  | CAS#  | Max   | a   | b   | c   |
|                                    |  |   |   | d   | e   |   |
| Hexane                             | µg/m³  | 110-54-3  | 630000  | 10200   | -   | -   |
| Isopropyl alcohol                  | µg/m³  | 67-63-0   | 160   | 2920  | -   | -   |
| Isopropyl benzene                  | µg/m³  | 98-82-8   | 9800 J  | 5840  | -   | -   |
| m&p-Xylenes                        | µg/m³  | M/P-XYLENE  | 590000  | -   | -   | -   |
| Methyl methacrylate                | µg/m³  | 80-62-6   | 1.4 J   | 10200   | -   | -   |
| Methyl tert butyl ether (MTBE)     | µg/m³  | 1634-04-4   | ND  | 1570  | -   | -   |
| Methylene chloride                 | µg/m³  | 75-09-2   | 40  | 8760  | -   | -   |
| Naphthalene                        | µg/m³  | 91-20-3   | 1.5 J   | 12  | -   | -   |
| N-Butylbenzene                     | µg/m³  | 104-51-8  | 16 J  | -   | -   | -   |
| N-Heptane                          | µg/m³  | 142-82-5  | 1100000   | 5840  | -   | -   |
| N-Propylbenzene                    | µg/m³  | 103-65-1  | 95 J  | 14600   | -   | -   |
| o-Xylene                           | µg/m³  | 95-47-6   | 180000  | 1460  | -   | -   |
| Styrene                            | µg/m³  | 100-42-5  | 3.5   | 14600   | -   | -   |
| tert-Butyl alcohol                 | µg/m³  | 75-65-0   | 11 J  | -   | -   | -   |
| tert-Butylbenzene                  | µg/m³  | 98-06-6   | 5.7 J   | -   | -   | -   |
| Tetrachloroethene                  | µg/m³  | 127-18-4  | 550   | 584   | -   | -   |
| Tetrahydrofuran                    | µg/m³  | 109-99-9  | 4.7 J   | 29200   | -   | -   |
| Toluene                            | µg/m³  | 108-88-3  | 1700000   | 73000   | -   | -   |
| trans-1,2-Dichloroethene           | µg/m³  | 156-60-5  | 330   | -   | -   | -   |
| trans-1,3-Dichloropropene          | µg/m³  | 10061-02-6  | ND  | -   | -   | -   |
| Trichloroethene                    | µg/m³  | 79-01-6   | 27000   | 29  | 290   | 880   |
| Trichlorofluoromethane (CFC-11)    | µg/m³  | 75-69-4   | 8.7   | -   | -   | -   |
| Trifluorotrichloroethane (CFC-113) | µg/m³  | 76-13-1   | 6.6   | 73000   | -   | -   |
| Vinyl bromide (Bromoethene)        | µg/m³  | 593-60-2  | ND  | 13  | -   | -   |
| Vinyl chloride                     | µg/m³  | 75-01-4   | 2500  | 93  | -   | -   |
| Xylenes (total)                    | µg/m³  | 1330-20-7   | 770000  | 1460  | -   | -   |
| Total VOCs                         | µg/m³  | -   | -   | -   | -   | -   |
|                                    |  |   |   | 127613  | 127337  | 2793.7  |
|                                    |  |   |   |   |   | 982.12  |
|                                    |  |   |   |   |   | 1668.3  |
|                                    |  |   |   |   |   | 799.21  |

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UJ - Not detected; associated reporting limit is estimated.

1 - USEPA sub slab or exterior soil gas concentration Vapor Intrusion Screening Levels (VISLs) based on cancer risk 1E 06 and hazard quotient (HQ)=0.1

2 - Ohio EPA accelerated and urgent response action levels and chronic response action level and removal management levels, from the Ohio EPA Guidance Document titled "Recommendations Regarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio", dated August 2016.

Table 3

**Analytical Results Summary and Commercial Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayon Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location                                      | Sample ID | Sample Date | USEPA <sup>1</sup> | Ohio EPA <sup>2</sup>     |  |   | GP06-09<br>SVA-38443-082118-GL-019<br>8/21/2018   | GP07-18<br>SVA-38443-082118-GL-018<br>8/21/2018 | GP09-09<br>SVA-38443-082118-GL-021<br>8/21/2018 | GP10-09<br>SVA-38443-082118-GL-020<br>8/21/2018 | GP11-09<br>SVA-38443-081518-GL-012<br>8/15/2018 | GP12-09<br>SVA-38443-082018-GL-013<br>8/20/2018 |
|--|-----------|-------------|--------------------|---------------------------|--|---|---|---|---|---|---|---|
|  |           |             |                    | Subslab VSL<br>Commercial | Accelerated<br>Response<br>Action Level<br>Commercial (8<br>hours) | Urgent<br>Response<br>Action Level<br>Commercial<br>(8 hours) | Chronic<br>Response<br>Action Level<br>Commercial | Removal<br>Management Level<br>Commercial       |   |   |   |   |
| Parameters   | Units     | CAS#        | Max                | a                         | b  | c   | d   | e   |   |   |   |   |
| <b>Volatiles</b>                                     |           |             |                    |                           |  |   |   |   |   |   |   |   |
| 1,1,1-Trichloroethane                                | µg/m³     | 71-55-6     | 33                 | 73000                     | -  | -   | -   | -   | 0.49 J  | 3700 U  | 4.1 J   | 4.5   |
| 1,1,2,2-Tetrachloroethane                            | µg/m³     | 79-34-5     | ND                 | 7                         | -  | -   | -   | -   | 0.42 U  | 9500 U  | 4.2 U   | 1.0 U   |
| 1,1,2-Trichloroethane                                | µg/m³     | 79-00-5     | ND                 | 3                         | -  | -   | -   | -   | 0.29 U  | 6700 U  | 2.9 U   | 0.74 U  |
| 1,1-Dichloroethane                                   | µg/m³     | 75-34-3     | 3200               | 256                       | -  | -   | -   | -   | 0.11 U  | 2400 U  | 1.1 U   | 2.9   |
| 1,1-Dichloroethene                                   | µg/m³     | 75-35-4     | 24                 | 2920                      | -  | -   | -   | -   | 0.13 U  | 3000 U  | 1.3 U   | 0.34 U  |
| 1,2,4-Trichlorobenzene                               | µg/m³     | 120-82-1    | ND                 | 29                        | -  | -   | -   | -   | 0.73 UJ   | 16000 UJ  | 7.3 UJ  | 1.8 UJ  |
| 1,2,4-Trimethylbenzene                               | µg/m³     | 95-63-6     | 8400 J             | 876                       | -  | -   | -   | -   | 8.9   | 8400 J <sup>a</sup>                             | 12  | 11  |
| 1,2-Dibromoethane (Ethylene dibromide)               | µg/m³     | 106-93-4    | ND                 | 1                         | -  | -   | -   | -   | 0.34 U  | 7600 U  | 3.4 U   | 0.85 U  |
| 1,2-Dichlorobenzene                                  | µg/m³     | 95-50-1     | ND                 | 2920                      | -  | -   | -   | -   | 0.42 U  | 9500 U  | 4.2 U   | 1.1 U   |
| 1,2-Dichloroethane                                   | µg/m³     | 107-06-2    | 1                  | 16                        | -  | -   | -   | -   | 0.89  | 4300 U  | 1.9 U   | 0.48 U  |
| 1,2-Dichloropropane                                  | µg/m³     | 78-87-5     | ND                 | 58                        | -  | -   | -   | -   | 0.24 U  | 5400 U  | 2.4 U   | 0.60 U  |
| 1,2-Dichlorotetrafluoroethane (CFC 114)              | µg/m³     | 76-14-2     | 310                | -                         | -  | -   | -   | -   | 0.22 U  | 5100 U  | 2.2 U   | 0.99 J  |
| 1,3,5-Trimethylbenzene                               | µg/m³     | 108-67-8    | 52 J               | 876                       | -  | -   | -   | -   | 2.5   | 7200 U  | 4.5 J   | 2.9   |
| 1,3-Butadiene  | µg/m³     | 106-99-0    | ND                 | 14                        | -  | -   | -   | -   | 0.14 U  | 3200 U  | 1.4 U   | 0.35 U  |
| 1,3-Dichlorobenzene                                  | µg/m³     | 541-73-1    | 6.9                | -                         | -  | -   | -   | -   | 0.63 J  | 8800 U  | 3.9 U   | 4.2   |
| 1,3-Dichloropropene                                  | µg/m³     | 542-75-6    | ND                 | 102                       | -  | -   | -   | -   | ND  | ND  | ND  | ND  |
| 1,4-Dichlorobenzene                                  | µg/m³     | 106-46-7    | 74 J               | 37                        | -  | -   | -   | -   | 0.38 U  | 8700 U  | 3.8 U   | 0.96 U  |
| 1,4-Dioxane  | µg/m³     | 123-91-1    | 0.73 J             | 82                        | -  | -   | -   | -   | 0.29 U  | 6500 U  | 2.9 U   | 0.72 U  |
| 2,2,4-Trimethylpentane                               | µg/m³     | 540-84-1    | 1800000            | -                         | -  | -   | -   | -   | 17  | 1800000   | 20 J  | 2.1 J   |
| 2-Butanone (Methyl ethyl ketone) (MEK)               | µg/m³     | 78-93-3     | 35 J               | 73000                     | -  | -   | -   | -   | 11  | 13000 U   | 13 J  | 12  |
| 2-Chlorotoluene                                      | µg/m³     | 95-49-8     | 1.5 J              | -                         | -  | -   | -   | -   | 0.33 U  | 7400 U  | 3.3 U   | 1.5 J   |
| 2-Hexanone   | µg/m³     | 591-78-6    | 8.9 J              | 438                       | -  | -   | -   | -   | 2.1   | 5400 U  | 2.4 U   | 1.7 J   |
| 2-Phenylbutane (sec-Butylbenzene)                    | µg/m³     | 135-98-8    | 47 J               | -                         | -  | -   | -   | -   | 0.35 U  | 7900 U  | 3.5 U   | 0.88 U  |
| 4-Ethyl toluene                                      | µg/m³     | 622-96-8    | 72 J               | -                         | -  | -   | -   | -   | 2.1   | 7300 U  | 4.0 J   | 2.6 J   |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/m³     | 108-10-1    | 4.3                | 43800                     | -  | -   | -   | -   | 1.8 J   | 18000 U   | 8.0 U   | 2.0 U   |
| Acetone  | µg/m³     | 67-64-1     | 460                | 451000                    | -  | -   | -   | -   | 69 J  | 75000 UJ  | 95 J  | 96  |
| Allyl chloride                                       | µg/m³     | 107-05-1    | ND                 | 15                        | -  | -   | -   | -   | 0.15 U  | 3400 U  | 1.5 U   | 0.38 U  |
| Benzene  | µg/m³     | 71-43-2     | 110000             | 52                        | -  | -   | -   | -   | 1.8   | 110000 <sup>a</sup>                             | 2.5 J   | 1.7   |
| Benzyl chloride                                      | µg/m³     | 100-44-7    | ND                 | 8                         | -  | -   | -   | -   | 0.40 U  | 9100 U  | 4.0 U   | 1.0 U   |
| Bromodichloromethane                                 | µg/m³     | 75-27-4     | ND                 | 11                        | -  | -   | -   | -   | 0.29 U  | 6700 U  | 2.9 U   | 0.74 U  |
| Bromoform  | µg/m³     | 75-25-2     | ND                 | 372                       | -  | -   | -   | -   | 0.50 U  | 11000 U   | 5.0 U   | 1.2 U   |
| Bromomethane (Methyl bromide)                        | µg/m³     | 74-83-9     | 0.98 J             | 73                        | -  | -   | -   | -   | 0.14 J  | 2800 U  | 1.2 U   | 0.31 U  |
| Butane   | µg/m³     | 106-97-8    | 8100               | -                         | -  | -   | -   | -   | 0.72 J  | 6200 J  | 1.8 J   | 3.1   |
| Carbon disulfide                                     | µg/m³     | 75-15-0     | 270 J              | 10200                     | -  | -   | -   | -   | 13  | 2200 U  | 34  | 4.7   |
| Carbon tetrachloride                                 | µg/m³     | 56-23-5     | 36                 | 68                        | -  | -   | 680   | 6800  | 0.24 U  | 5400 U  | 2.4 U   | 0.60 U  |
| Chlorobenzene  | µg/m³     | 108-90-7    | 110000             | 730                       | -  | -   | -   | -   | 0.23 U  | 5100 U  | 2.3 U   | 0.56 U  |
| Chlorodifluoromethane                                | µg/m³     | 75-45-6     | 580                | 730000                    | -  | -   | -   | -   | 5.6   | 3000 U  | 4.1 J   | 5.3   |
| Chloroethane   | µg/m³     | 75-00-3     | 550                | 146000                    | -  | -   | -   | -   | 0.092 U   | 2100 U  | 0.92 U  | 0.23 U  |
| Chloroform (Trichloromethane)                        | µg/m³     | 67-66-3     | 110 J              | 18                        | -  | -   | 180   | 1800  | 0.38 J  | 4200 U  | 1.9 U   | 0.46 U  |
| Chloromethane (Methyl chloride)                      | µg/m³     | 74-87-3     | 3.5                | 1310                      | -  | -   | -   | -   | 0.55 J  | 7500 U  | 3.3 U   | 0.83 U  |
| cis-1,2-Dichloroethene                               | µg/m³     | 156-59-2    | 1700               | -                         | -  | -   | -   | -   | 0.24 U  | 5400 U  | 2.4 U   | 3.2   |
| cis-1,3-Dichloropropene                              | µg/m³     | 10061-01-5  | ND                 | -                         | -  | -   | -   | -   | 0.34 U  | 7600 U  | 3.4 U   | 0.84 U  |
| Cyclohexane  | µg/m³     | 110-82-7    | 230000             | 87600                     | -  | -   | -   | -   | 2.5   | 230000 <sup>a</sup>                             | 2.5 J   | 1.1 J   |
| Cymene (p-Isopropyltoluene)                          | µg/m³     | 99-87-6     | 0.46 J             | -                         | -  | -   | -   | -   | 0.40 J  | 7100 U  | 3.1 U   | 0.78 U  |
| Dibromochloromethane                                 | µg/m³     | 124-48-1    | ND                 | -                         | -  | -   | -   | -   | 0.36 U  | 8100 U  | 3.6 U   | 0.89 U  |
| Dichlorodifluoromethane (CFC-12)                     | µg/m³     | 75-71-8     | 570                | 1460                      | -  | -   | -   | -   | 1.2   | 7600 U  | 3.6 J   | 9.0   |
| Ethylbenzene   | µg/m³     | 100-41-4    | 140000             | 164                       | -  | -   | -   | -   | 2.8   | 140000 <sup>a</sup>                             | 11  | 3.4   |
| Hexachlorobutadiene                                  | µg/m³     | 87-68-3     | ND                 | 19                        | -  | -   | -   | -   | 0.83 UJ   | 19000 UJ  | 8.3 UJ  | 2.1 UJ  |

Table 3

**Analytical Results Summary and Commercial Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location                    | Sample ID | Sample Date | GP06-09<br>SVA-38443-082118-GL-019<br>8/21/2018 | GP07-18<br>SVA-38443-082118-GL-018<br>8/21/2018  | GP09-09<br>SVA-38443-082118-GL-021<br>8/21/2018   | GP10-09<br>SVA-38443-082118-GL-020<br>8/21/2018               | GP11-09<br>SVA-38443-081518-GL-012<br>8/15/2018   | GP12-09<br>SVA-38443-082018-GL-013<br>8/20/2018 |                            |
|------------------------------------|-----------|-------------|---|--|---|---|---|---|----------------------------|
| Parameters                         | Units     | CAS#        | Max   | USEPA <sup>1</sup><br>Subslab VISL<br>Commercial | Ohio EPA <sup>2</sup><br>Accelerated<br>Response<br>Action Level<br>Commercial (8<br>hours) | Urgent<br>Response<br>Action Level<br>Commercial<br>(8 hours) | Chronic<br>Response<br>Action Level<br>Commercial | Removal<br>Management Level<br>Commercial       |                            |
|                                    |           |             |   | a  | b   | c   | d   | e   |                            |
| Hexane                             | µg/m³     | 110-54-3    | 630000  | 10200  | -   | -   | -   | 15  | <b>630000<sup>a</sup></b>  |
| Isopropyl alcohol                  | µg/m³     | 67-63-0     | 160   | 2920   | -   | -   | -   | 57  | 5200 U                     |
| Isopropyl benzene                  | µg/m³     | 98-82-8     | 9800 J  | 5840   | -   | -   | -   | 1.4 J   | <b>9800 J<sup>a</sup></b>  |
| m&p-Xylenes                        | µg/m³     | M/P-XYLENE  | 590000  | -  | -   | -   | -   | 12  | 590000                     |
| Methyl methacrylate                | µg/m³     | 80-62-6     | 1.4 J   | 10200  | -   | -   | -   | 0.32 U  | 7300 U                     |
| Methyl tert butyl ether (MTBE)     | µg/m³     | 1634-04-4   | ND  | 1570   | -   | -   | -   | 0.61 U  | 14000 U                    |
| Methylene chloride                 | µg/m³     | 75-09-2     | 40  | 8760   | -   | -   | -   | 70  | 25000 U                    |
| Naphthalene                        | µg/m³     | 91-20-3     | 1.5 J   | 12   | -   | -   | 120   | 1200  | 0.79 J                     |
| N-Butylbenzene                     | µg/m³     | 104-51-8    | 16 J  | -  | -   | -   | -   | 1.8 J   | 5700 U                     |
| N-Heptane                          | µg/m³     | 142-82-5    | 1100000   | 5840   | -   | -   | -   | 12  | <b>1100000<sup>a</sup></b> |
| N-Propylbenzene                    | µg/m³     | 103-65-1    | 95 J  | 14600  | -   | -   | -   | 1.2 J   | 6200 U                     |
| o-Xylene                           | µg/m³     | 95-47-6     | 180000  | 1460   | -   | -   | -   | 4 9   | <b>180000<sup>a</sup></b>  |
| Styrene                            | µg/m³     | 100-42-5    | 3.5   | 14600  | -   | -   | -   | 1 2   | 5600 U                     |
| tert-Butyl alcohol                 | µg/m³     | 75-65-0     | 11 J  | -  | -   | -   | -   | 3.3 J   | 2600 U                     |
| tert-Butylbenzene                  | µg/m³     | 98-06-6     | 5.7 J   | -  | -   | -   | -   | 0.36 U  | 8200 U                     |
| Tetrachloroethene                  | µg/m³     | 127-18-4    | 550   | 584  | -   | -   | 5800  | 18000   | 22                         |
| Tetrahydrofuran                    | µg/m³     | 109-99-9    | 4.7 J   | 29200  | -   | -   | -   | 0.19 U  | 4200 U                     |
| Toluene                            | µg/m³     | 108-88-3    | 1700000   | 73000  | -   | -   | -   | 23  | <b>1700000<sup>a</sup></b> |
| trans-1,2-Dichloroethene           | µg/m³     | 156-60-5    | 330   | -  | -   | -   | -   | 0.59 J  | 4500 U                     |
| trans-1,3-Dichloropropene          | µg/m³     | 10061-02-6  | ND  | -  | -   | -   | -   | 0.22 U  | 4900 U                     |
| Trichloroethene                    | µg/m³     | 79-01-6     | 27000   | 29   | 290   | 880   | -   | 0.28 J  | 4400 U                     |
| Trichlorofluoromethane (CFC-11)    | µg/m³     | 75-69-4     | 8.7   | -  | -   | -   | -   | 8.7   | 3100 U                     |
| Trifluorotrichloroethane (CFC-113) | µg/m³     | 76-13-1     | 6.6   | 73000  | -   | -   | -   | 0.60 J  | 5400 U                     |
| Vinyl bromide (Bromoethene)        | µg/m³     | 593-60-2    | ND  | 13   | -   | -   | -   | 0.15 U  | 3500 U                     |
| Vinyl chloride                     | µg/m³     | 75-01-4     | 2500  | 93   | -   | -   | 930   | 9300  | 0.18 U                     |
| Xylenes (total)                    | µg/m³     | 1330-20-7   | 770000  | 1460   | -   | -   | -   | 16.9  | <b>770000<sup>a</sup></b>  |
| Total VOCs                         | µg/m³     | -           | -   | -  | -   | -   | -   | 335.16  | 7274400                    |
|                                    |           |             |   |  |   |   |   |   | 1290.9                     |
|                                    |           |             |   |  |   |   |   |   | 466.85                     |
|                                    |           |             |   |  |   |   |   |   | 184.11                     |
|                                    |           |             |   |  |   |   |   |   | 1037.26                    |

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UJ - Not detected; associated reporting limit is estimated.

1 - USEPA sub slab or exterior soil gas concentration Vapor Intrusion Screening Levels (VISLs) based on cancer risk 1E 06 and hazard quotient (HQ)=0.1

2 - Ohio EPA accelerated and urgent response action levels and chronic response action level and removal management levels, from the Ohio EPA Guidance Document titled "Recommendations Regarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio", dated August 2016.

Table 3

**Analytical Results Summary and Commercial Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayon Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location                                      | GP13-09<br>SVA-38443-082018-GL-014<br>8/20/2018 | GP14-09<br>SVA-38443-082018-GL-015<br>8/20/2018 | GP14-09<br>SVA-38443-082018-GL-016<br>8/20/2018 | GP15-09<br>SVA-38443-082018-GL-017<br>8/20/2018  | GP16-09<br>SVA-38443-082318-GL-028<br>8/23/2018                                       | GP19-18<br>SVA-38443-082318-GL-034<br>8/23/2018                       |   |  |                  |        |        |                   |       |   |   |   |   |   |   |
|--|---|---|---|--|---|---|---|--|------------------|--------|--------|-------------------|-------|---|---|---|---|---|---|
| Sample ID  |   |   |   |  |   |   |   |  |                  |        |        |                   |       |   |   |   |   |   |   |
| Sample Date  |   |   |   |  |   |   |   |  |                  |        |        |                   |       |   |   |   |   |   |   |
| Parameters   | Units   | CAS#  | Max   | USEPA <sup>1</sup><br>Subslab VISL<br>Commercial | Ohio EPA <sup>2</sup><br>Accelerated Response<br>Action Level<br>Commercial (8 hours) | Ohio EPA <sup>2</sup><br>Urgent Response<br>Action Level<br>(8 hours) | Ohio EPA <sup>2</sup><br>Chronic Response<br>Action Level<br>Commercial | Removal Management Level<br>Commercial | a                | b      | c      | d                 | e     | GP13-09<br>SVA-38443-082018-GL-014<br>8/20/2018 | GP14-09<br>SVA-38443-082018-GL-015<br>8/20/2018 | GP14-09<br>SVA-38443-082018-GL-016<br>8/20/2018 | GP15-09<br>SVA-38443-082018-GL-017<br>8/20/2018 | GP16-09<br>SVA-38443-082318-GL-028<br>8/23/2018 | GP19-18<br>SVA-38443-082318-GL-034<br>8/23/2018 |
| <b>Volatiles</b>                                     |   |   |   |  |   |   |   |  |                  |        |        |                   |       |   |   |   |   |   |   |
| 1,1,1-Trichloroethane                                | µg/m³   | 71-55-6   | 33  | 73000  | -   | -   | -   | -                                      | 14               | 1.3 J  | 1.3 J  | 8.5 J             | 17 U  | 4.8 U   |   |   |   |   |   |
| 1,1,2,2-Tetrachloroethane                            | µg/m³   | 79-34-5   | ND  | 7  | -   | -   | -   | -                                      | 0.42 U           | 1.7 U  | 1.7 U  | 12 U              | 43 U  | 12 U  |   |   |   |   |   |
| 1,1,2-Trichloroethane                                | µg/m³   | 79-00-5   | ND  | 3  | -   | -   | -   | -                                      | 0.29 U           | 1.2 U  | 1.2 U  | 8.7 U             | 30 U  | 8.7 U   |   |   |   |   |   |
| 1,1-Dichloroethane                                   | µg/m³   | 75-34-3   | 3200  | 256  | -   | -   | -   | -                                      | 310 <sup>a</sup> | 1.5 J  | 1.7 J  | 3200 <sup>a</sup> | 55 J  | 3.1 U   |   |   |   |   |   |
| 1,1-Dichloroethene                                   | µg/m³   | 75-35-4   | 24  | 2920   | -   | -   | -   | -                                      | 0.32 J           | 0.54 U | 0.54 U | 6.7 J             | 14 U  | 11 J  |   |   |   |   |   |
| 1,2,4-Trichlorobenzene                               | µg/m³   | 120-82-1  | ND  | 29   | -   | -   | -   | -                                      | 0.73 UJ          | 2.9 UJ | 2.9 UJ | 22 UJ             | 75 UJ | 22 U  |   |   |   |   |   |
| 1,2,4-Trimethylbenzene                               | µg/m³   | 95-63-6   | 8400 J  | 876  | -   | -   | -   | -                                      | 8.4              | 5.1    | 5.0    | 11 J              | 32 U  | 9.2 U   |   |   |   |   |   |
| 1,2-Dibromoethane (Ethylene dibromide)               | µg/m³   | 106-93-4  | ND  | 1  | -   | -   | -   | -                                      | 0.34 U           | 1.4 U  | 1.4 U  | 10 U              | 35 U  | 10 U  |   |   |   |   |   |
| 1,2-Dichlorobenzene                                  | µg/m³   | 95-50-1   | ND  | 2920   | -   | -   | -   | -                                      | 0.42 U           | 1.7 U  | 1.7 U  | 12 U              | 43 U  | 12 U  |   |   |   |   |   |
| 1,2-Dichloroethane                                   | µg/m³   | 107-06-2  | 1   | 16   | -   | -   | -   | -                                      | 0.19 U           | 0.76 U | 0.76 U | 5.6 U             | 20 U  | 5.6 U   |   |   |   |   |   |
| 1,2-Dichloropropane                                  | µg/m³   | 78-87-5   | ND  | 58   | -   | -   | -   | -                                      | 0.24 U           | 0.96 U | 0.96 U | 7.1 U             | 25 U  | 7.1 U   |   |   |   |   |   |
| 1,2-Dichlorotetrafluoroethane (CFC 114)              | µg/m³   | 76-14-2   | 310   | -  | -   | -   | -   | -                                      | 8.6              | 0.89 U | 0.89 U | 6.6 U             | 23 U  | 6.6 U   |   |   |   |   |   |
| 1,3,5-Trimethylbenzene                               | µg/m³   | 108-67-8  | 52 J  | 876  | -   | -   | -   | -                                      | 2.2              | 1.4 J  | 1.3 J  | 9.5 U             | 33 U  | 9.5 U   |   |   |   |   |   |
| 1,3-Butadiene  | µg/m³   | 106-99-0  | ND  | 14   | -   | -   | -   | -                                      | 0.14 U           | 0.57 U | 0.57 U | 4.2 U             | 15 U  | 4.2 U   |   |   |   |   |   |
| 1,3-Dichlorobenzene                                  | µg/m³   | 541-73-1  | 6.9   | -  | -   | -   | -   | -                                      | 0.39 U           | 1.6 U  | 1.6 U  | 12 U              | 40 U  | 12 U  |   |   |   |   |   |
| 1,3-Dichloropropene                                  | µg/m³   | 542-75-6  | ND  | 102  | -   | -   | -   | -                                      | ND               | ND     | ND     | ND                | ND    | ND  |   |   |   |   |   |
| 1,4-Dichlorobenzene                                  | µg/m³   | 106-46-7  | 74 J  | 37   | -   | -   | -   | -                                      | 0.38 U           | 1.5 U  | 1.5 U  | 11 U              | 40 U  | 11 U  |   |   |   |   |   |
| 1,4-Dioxane  | µg/m³   | 123-91-1  | 0.73 J  | 82   | -   | -   | -   | -                                      | 0.29 U           | 1.2 U  | 1.2 U  | 8.5 U             | 30 U  | 8.5 U   |   |   |   |   |   |
| 2,2,4-Trimethylpentane                               | µg/m³   | 540-84-1  | 1800000   | -  | -   | -   | -   | -                                      | 0.44 J           | 0.73 U | 0.73 U | 5.4 U             | 3600  | 190   |   |   |   |   |   |
| 2-Butanone (Methyl ethyl ketone) (MEK)               | µg/m³   | 78-93-3   | 35 J  | 73000  | -   | -   | -   | -                                      | 5.9              | 5.9 J  | 2.6 J  | 17 U              | 61 U  | 35 J  |   |   |   |   |   |
| 2-Chlorotoluene                                      | µg/m³   | 95-49-8   | 1.5 J   | -  | -   | -   | -   | -                                      | 0.33 U           | 1.3 U  | 1.3 U  | 9.7 U             | 34 U  | 9.7 U   |   |   |   |   |   |
| 2-Hexanone   | µg/m³   | 591-78-6  | 8.9 J   | 438  | -   | -   | -   | -                                      | 0.97 J           | 0.95 U | 0.95 U | 7.0 U             | 24 U  | 7.0 U   |   |   |   |   |   |
| 2-Phenylbutane (sec-Butylbenzene)                    | µg/m³   | 135-98-8  | 47 J  | -  | -   | -   | -   | -                                      | 0.35 U           | 1.4 U  | 1.4 U  | 10 U              | 36 U  | 10 U  |   |   |   |   |   |
| 4-Ethyl toluene                                      | µg/m³   | 622-96-8  | 72 J  | -  | -   | -   | -   | -                                      | 1.9 J            | 1.3 U  | 1.3 U  | 9.6 U             | 33 U  | 9.6 U   |   |   |   |   |   |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/m³   | 108-10-1  | 4.3   | 43800  | -   | -   | -   | -                                      | 1.1 J            | 3.2 U  | 3.2 U  | 24 U              | 82 U  | 24 U  |   |   |   |   |   |
| Acetone  | µg/m³   | 67-64-1   | 460   | 451000   | -   | -   | -   | -                                      | 58               | 54 J   | 28 J   | 98 U              | 340 U | 340 J   |   |   |   |   |   |
| Allyl chloride                                       | µg/m³   | 107-05-1  | ND  | 15   | -   | -   | -   | -                                      | 0.15 U           | 0.60 U | 0.60 U | 4.4 U             | 15 U  | 4.4 U   |   |   |   |   |   |
| Benzene  | µg/m³   | 71-43-2   | 110000  | 52   | -   | -   | -   | -                                      | 0.32 J           | 0.72 U | 0.72 U | 5.3 U             | 18 U  | 45  |   |   |   |   |   |
| Benzyl chloride                                      | µg/m³   | 100-44-7  | ND  | 8  | -   | -   | -   | -                                      | 0.40 U           | 1.6 U  | 1.6 U  | 12 U              | 42 U  | 12 U  |   |   |   |   |   |
| Bromodichloromethane                                 | µg/m³   | 75-27-4   | ND  | 11   | -   | -   | -   | -                                      | 0.29 U           | 1.2 U  | 1.2 U  | 8.7 U             | 30 U  | 8.7 U   |   |   |   |   |   |
| Bromoform  | µg/m³   | 75-25-2   | ND  | 372  | -   | -   | -   | -                                      | 0.50 U           | 2.0 U  | 2.0 U  | 15 U              | 51 U  | 15 U  |   |   |   |   |   |
| Bromomethane (Methyl bromide)                        | µg/m³   | 74-83-9   | 0.98 J  | 73   | -   | -   | -   | -                                      | 0.12 U           | 0.50 U | 0.50 U | 3.7 U             | 13 U  | 3.7 U   |   |   |   |   |   |
| Butane   | µg/m³   | 106-97-8  | 8100  | -  | -   | -   | -   | -                                      | 13               | 1.1 J  | 0.69 U | 5.1 U             | 6800  | 940   |   |   |   |   |   |
| Carbon disulfide                                     | µg/m³   | 75-15-0   | 270 J   | 10200  | -   | -   | -   | -                                      | 14               | 5.9 J  | 4.2 J  | 26 J              | 11 J  | 40 J  |   |   |   |   |   |
| Carbon tetrachloride                                 | µg/m³   | 56-23-5   | 36  | 68   | -   | -   | 680   | 6800                                   | 0.24 U           | 0.96 U | 0.96 U | 9.2 J             | 25 U  | 7.1 U   |   |   |   |   |   |
| Chlorobenzene  | µg/m³   | 108-90-7  | 110000  | 730  | -   | -   | -   | -                                      | 0.23 U           | 0.90 U | 0.90 U | 6.7 U             | 23 U  | 6.7 U   |   |   |   |   |   |
| Chlorodifluoromethane                                | µg/m³   | 75-45-6   | 580   | 730000   | -   | -   | -   | -                                      | 0.94             | 7.3    | 5.4    | 7.7 J             | 110   | 3.9 U   |   |   |   |   |   |
| Chloroethane   | µg/m³   | 75-00-3   | 550   | 146000   | -   | -   | -   | -                                      | 0.97             | 0.37 U | 0.37 U | 12 J              | 95 U  | 9.2 J   |   |   |   |   |   |
| Chloroform (Trichloromethane)                        | µg/m³   | 67-66-3   | 110 J   | 18   | -   | -   | 180   | 1800                                   | 3.6              | 7.6    | 7.4    | 17 J              | 19 U  | 5.5 U   |   |   |   |   |   |
| Chloromethane (Methyl chloride)                      | µg/m³   | 74-87-3   | 3.5   | 1310   | -   | -   | -   | -                                      | 0.46 J           | 1.3 U  | 1.3 U  | 9.8 U             | 34 U  | 9.8 U   |   |   |   |   |   |
| cis-1,2-Dichloroethene                               | µg/m³   | 156-59-2  | 1700  | -  | -   | -   | -   | -                                      | 0.24 U           | 3.5    | 3.1 J  | 1400              | 24 U  | 1700  |   |   |   |   |   |
| cis-1,3-Dichloropropene                              | µg/m³   | 10061-01-5                                      | ND  | -  | -   | -   | -</td   |  |                  |        |        |                   |       |   |   |   |   |   |   |

Table 3

**Analytical Results Summary and Commercial Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date | Parameters | Units             | CAS#       | Max     | USEPA <sup>1</sup><br>Subslab VISL<br>Commercial | Ohio EPA <sup>2</sup>  |   |   | GP13-09<br>SVA-38443-082018-GL-014<br>8/20/2018 | GP14-09<br>SVA-38443-082018-GL-015<br>8/20/2018 | GP14-09<br>SVA-38443-082018-GL-016<br>8/20/2018 | GP15-09<br>SVA-38443-082018-GL-017<br>8/20/2018 | GP16-09<br>SVA-38443-082318-GL-028<br>8/23/2018 | GP19-18<br>SVA-38443-082318-GL-034<br>8/23/2018 |                    |
|---|------------|-------------------|------------|---------|--|--|---|---|---|---|---|---|---|---|--------------------|
|   |            |                   |            |         |  | Accelerated<br>Response<br>Action Level<br>Commercial (8<br>hours) | Urgent<br>Response<br>Action Level<br>Commercial<br>(8 hours) | Chronic<br>Response<br>Action Level<br>Commercial |   |   |   |   |   |   |                    |
|   |            |                   |            |         |  | a  | b   | c   | d   | e   |   |   |   |   |                    |
| Hexane                                      |            | µg/m <sup>3</sup> | 110-54-3   | 630000  | 10200  | -  | -   | -   | -   | 1.1 J   | 0.45 U  | 0.73 J  | 3.3 U   | 210   | 340                |
| Isopropyl alcohol                           |            | µg/m <sup>3</sup> | 67-63-0    | 160     | 2920   | -  | -   | -   | -   | 1.6 J   | 4.2 J   | 2.5 J   | 6.8 U   | 24 U  | 76 J               |
| Isopropyl benzene                           |            | µg/m <sup>3</sup> | 98-82-8    | 9800 J  | 5840   | -  | -   | -   | -   | 0.29 U  | 1.2 U   | 1.2 U   | 8.7 U   | 30 U  | 8.7 U              |
| m&p-Xylenes                                 |            | µg/m <sup>3</sup> | M/P-XYLENE | 590000  | -  | -  | -   | -   | -   | 5.1   | 3.0 J   | 2.8 J   | 15 U  | 54 U  | 47                 |
| Methyl methacrylate                         |            | µg/m <sup>3</sup> | 80-62-6    | 1.4 J   | 10200  | -  | -   | -   | -   | 0.32 U  | 1.3 U   | 1.3 U   | 9.6 U   | 33 U  | 9.6 U              |
| Methyl tert butyl ether (MTBE)              |            | µg/m <sup>3</sup> | 1634-04-4  | ND      | 1570   | -  | -   | -   | -   | 0.61 U  | 2.5 U   | 2.5 U   | 18 U  | 63 U  | 18 U               |
| Methylene chloride                          |            | µg/m <sup>3</sup> | 75-09-2    | 40      | 8760   | -  | -   | -   | -   | 2.4   | 4.4 U   | 5.0 J   | 33 U  | 110 U   | 33 U               |
| Naphthalene                                 |            | µg/m <sup>3</sup> | 91-20-3    | 1.5 J   | 12   | -  | -   | 120   | 1200  | 1.0 J   | 1.9 UJ  | 1.9 UJ  | 14 UJ   | 49 UJ   | 14 U               |
| N-Butylbenzene                              |            | µg/m <sup>3</sup> | 104-51-8   | 16 J    | -  | -  | -   | -   | -   | 2.0 J   | 1.3 J   | 1.3 J   | 7.5 U   | 26 U  | 7.5 U              |
| N-Heptane                                   |            | µg/m <sup>3</sup> | 142-82-5   | 1100000 | 5840   | -  | -   | -   | -   | 0.44 J  | 0.77 U  | 0.77 U  | 5.7 U   | 20 U  | 330                |
| N-Propylbenzene                             |            | µg/m <sup>3</sup> | 103-65-1   | 95 J    | 14600  | -  | -   | -   | -   | 1.1 J   | 1.1 U   | 1.1 U   | 8.1 U   | 28 U  | 8.1 U              |
| o-Xylene                                    |            | µg/m <sup>3</sup> | 95-47-6    | 180000  | 1460   | -  | -   | -   | -   | 2.6   | 1.5 J   | 1.6 J   | 7.8 U   | 27 U  | 18 J               |
| Styrene                                     |            | µg/m <sup>3</sup> | 100-42-5   | 3.5     | 14600  | -  | -   | -   | -   | 0.82 J  | 0.99 U  | 0.99 U  | 7.3 U   | 25 U  | 7.3 U              |
| tert-Butyl alcohol                          |            | µg/m <sup>3</sup> | 75-65-0    | 11 J    | -  | -  | -   | -   | -   | 4.4 J   | 2.6 J   | 0.64 J  | 5.3 J   | 12 U  | 8.3 J              |
| tert-Butylbenzene                           |            | µg/m <sup>3</sup> | 98-06-6    | 5.7 J   | -  | -  | -   | -   | -   | 0.36 U  | 1.4 U   | 1.4 U   | 11 U  | 37 U  | 11 U               |
| Tetrachloroethene                           |            | µg/m <sup>3</sup> | 127-18-4   | 550     | 584  | -  | -   | 5800  | 18000   | 1.3 J   | 330   | 370   | 25 J  | 28 U  | 8.0 U              |
| Tetrahydrofuran                             |            | µg/m <sup>3</sup> | 109-99-9   | 4.7 J   | 29200  | -  | -   | -   | -   | 0.57 J  | 0.74 U  | 1.0 J   | 5.5 U   | 19 U  | 5.5 U              |
| Toluene                                     |            | µg/m <sup>3</sup> | 108-88-3   | 1700000 | 73000  | -  | -   | -   | -   | 4.8   | 1.9 J   | 1.9 J   | 13 U  | 47 U  | 71                 |
| trans-1,2-Dichloroethene                    |            | µg/m <sup>3</sup> | 156-60-5   | 330     | -  | -  | -   | -   | -   | 0.20 U  | 1.0 J   | 1.0 J   | 57  | 20 U  | 30                 |
| trans-1,3-Dichloropropene                   |            | µg/m <sup>3</sup> | 10061-02-6 | ND      | -  | -  | -   | -   | -   | 0.22 U  | 0.87 U  | 0.87 U  | 6.4 U   | 22 U  | 6.4 U              |
| Trichloroethene                             |            | µg/m <sup>3</sup> | 79-01-6    | 27000   | 29   | 290  | 880   | -   | -   | 1.3   | 520 <sup>ab</sup>                               | 510 <sup>ab</sup>                               | 3400 <sup>abc</sup>                             | 20 U  | 13 J               |
| Trichlorofluoromethane (CFC-11)             |            | µg/m <sup>3</sup> | 75-69-4    | 8.7     | -  | -  | -   | -   | -   | 0.88 J  | 1.6 J   | 1.7 J   | 4.0 U   | 14 U  | 4.0 U              |
| Trifluorotrichloroethane (CFC-113)          |            | µg/m <sup>3</sup> | 76-13-1    | 6.6     | 73000  | -  | -   | -   | -   | 6.6   | 0.95 U  | 0.95 U  | 7.0 U   | 24 U  | 7.0 U              |
| Vinyl bromide (Bromoethene)                 |            | µg/m <sup>3</sup> | 593-60-2   | ND      | 13   | -  | -   | -   | -   | 0.15 U  | 0.61 U  | 0.61 U  | 4.5 U   | 16 U  | 4.5 U              |
| Vinyl chloride                              |            | µg/m <sup>3</sup> | 75-01-4    | 2500    | 93   | -  | -   | 930   | 9300  | 3.1   | 0.73 U  | 0.73 U  | 14 J  | 370 <sup>a</sup>                                | 2500 <sup>ad</sup> |
| Xylenes (total)                             |            | µg/m <sup>3</sup> | 1330-20-7  | 770000  | 1460   | -  | -   | -   | -   | 7.7   | 4.5   | 4.4   | ND  | ND  | 65                 |
| Total VOCs                                  |            | µg/m <sup>3</sup> | -          | -       | -  | -  | -   | -   | -   | 508.83  | 968.5   | 966.87  | 8199.4  | 11205   | 6982.5             |

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UJ - Not detected; associated reporting limit is estimated.

1 - USEPA sub slab or exterior soil gas concentration Vapor Intrusion Screening Levels (VISLs) based on cancer risk 1E 06 and hazard quotient (HQ)=0.1

2 - Ohio EPA accelerated and urgent response action levels and chronic response action level and removal management levels, from the Ohio EPA Guidance Document titled "Recommendations Regarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio", dated August 2016.

Table 3

**Analytical Results Summary and Commercial Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location                                      | Sample ID         | Sample Date | USEPA <sup>1</sup> | Near GP19                 |  |   | GP20-18   |   | GP21-09                              |                                      | GP22-13                              |                                      | GP22-13                              |                                      | GP23-13   |  |
|--|-------------------|-------------|--------------------|---------------------------|--|---|---|---|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|-----------|--|
|  |                   |             |                    | Subslab VSL<br>Commercial | Accelerated<br>Response<br>Action Level<br>Commercial (8<br>hours) | Urgent<br>Response<br>Action Level<br>Commercial<br>(8 hours) | Chronic<br>Response<br>Action Level<br>Commercial | Removal<br>Management Level<br>Commercial | SVA-38443-082318-GL-033<br>8/23/2018 | SVA-38443-082318-GL-030<br>8/23/2018 | SVA-38443-081418-GL-001<br>8/14/2018 | SVA-38443-082318-GL-031<br>8/23/2018 | SVA-38443-082318-GL-032<br>8/23/2018 | SVA-38443-082218-GL-025<br>8/22/2018 | Duplicate |  |
| Parameters   | Units             | CAS#        | Max                | a                         | b  | c   | d   | e   |                                      |                                      |                                      |                                      |                                      |                                      |           |  |
| <b>Volatiles</b>                                     |                   |             |                    |                           |  |   |   |   |                                      |                                      |                                      |                                      |                                      |                                      |           |  |
| 1,1,1-Trichloroethane                                | µg/m <sup>3</sup> | 71-55-6     | 33                 | 73000                     | -  | -   | -   | -   | 0.16 U                               | 22 U                                 | 3.3 U                                | 0.27 J                               | 0.26 J                               | 1.6 J                                |           |  |
| 1,1,2,2-Tetrachloroethane                            | µg/m <sup>3</sup> | 79-34-5     | ND                 | 7                         | -  | -   | -   | -   | 0.42 U                               | 57 U                                 | 8.4 U                                | 0.42 U                               | 0.42 U                               | 1.7 U                                |           |  |
| 1,1,2-Trichloroethane                                | µg/m <sup>3</sup> | 79-00-5     | ND                 | 3                         | -  | -   | -   | -   | 0.29 U                               | 40 U                                 | 5.9 U                                | 0.29 U                               | 0.29 U                               | 1.2 U                                |           |  |
| 1,1-Dichloroethane                                   | µg/m <sup>3</sup> | 75-34-3     | 3200               | 256                       | -  | -   | -   | -   | 0.11 U                               | 14 U                                 | 4.3 J                                | 1.7                                  | 1.7                                  | 0.42 U                               |           |  |
| 1,1-Dichloroethene                                   | µg/m <sup>3</sup> | 75-35-4     | 24                 | 2920                      | -  | -   | -   | -   | 0.13 U                               | 18 U                                 | 2.7 U                                | 1.7                                  | 1.7                                  | 0.54 U                               |           |  |
| 1,2,4-Trichlorobenzene                               | µg/m <sup>3</sup> | 120-82-1    | ND                 | 29                        | -  | -   | -   | -   | 0.73 U                               | 99 U                                 | 15 UJ                                | 0.73 U                               | 0.73 U                               | 2.9 U                                |           |  |
| 1,2,4-Trimethylbenzene                               | µg/m <sup>3</sup> | 95-63-6     | 8400 J             | 876                       | -  | -   | -   | -   | 0.31 U                               | 42 U                                 | 6.2 U                                | 1.6                                  | 1.5                                  | 3.0 J                                |           |  |
| 1,2-Dibromoethane (Ethylene dibromide)               | µg/m <sup>3</sup> | 106-93-4    | ND                 | 1                         | -  | -   | -   | -   | 0.34 U                               | 46 U                                 | 6.8 U                                | 0.34 U                               | 0.34 U                               | 1.4 U                                |           |  |
| 1,2-Dichlorobenzene                                  | µg/m <sup>3</sup> | 95-50-1     | ND                 | 2920                      | -  | -   | -   | -   | 0.42 U                               | 57 U                                 | 8.4 U                                | 0.42 U                               | 0.42 U                               | 1.7 U                                |           |  |
| 1,2-Dichloroethane                                   | µg/m <sup>3</sup> | 107-06-2    | 1                  | 16                        | -  | -   | -   | -   | 0.19 U                               | 26 U                                 | 3.8 U                                | 1.0                                  | 0.95                                 | 0.76 U                               |           |  |
| 1,2-Dichloropropane                                  | µg/m <sup>3</sup> | 78-87-5     | ND                 | 58                        | -  | -   | -   | -   | 0.24 U                               | 33 U                                 | 4.8 U                                | 0.24 U                               | 0.24 U                               | 0.96 U                               |           |  |
| 1,2-Dichlorotetrafluoroethane (CFC 114)              | µg/m <sup>3</sup> | 76-14-2     | 310                | -                         | -  | -   | -   | -   | 0.22 U                               | 30 U                                 | 4.5 U                                | 0.22 U                               | 0.22 U                               | 0.89 U                               |           |  |
| 1,3,5-Trimethylbenzene                               | µg/m <sup>3</sup> | 108-67-8    | 52 J               | 876                       | -  | -   | -   | -   | 0.32 U                               | 43 U                                 | 6.4 U                                | 0.37 J                               | 0.37 J                               | 1.3 U                                |           |  |
| 1,3-Butadiene  | µg/m <sup>3</sup> | 106-99-0    | ND                 | 14                        | -  | -   | -   | -   | 0.14 U                               | 19 U                                 | 2.8 U                                | 0.14 U                               | 0.14 U                               | 0.57 U                               |           |  |
| 1,3-Dichlorobenzene                                  | µg/m <sup>3</sup> | 541-73-1    | 6.9                | -                         | -  | -   | -   | -   | 0.39 U                               | 53 U                                 | 7.8 U                                | 0.58 J                               | 0.64 J                               | 1.6 U                                |           |  |
| 1,3-Dichloropropene                                  | µg/m <sup>3</sup> | 542-75-6    | ND                 | 102                       | -  | -   | -   | -   | ND                                   | ND                                   | ND                                   | ND                                   | ND                                   | ND                                   |           |  |
| 1,4-Dichlorobenzene                                  | µg/m <sup>3</sup> | 106-46-7    | 74 J               | 37                        | -  | -   | -   | -   | 0.38 U                               | 52 U                                 | 7.7 U                                | 0.38 U                               | 0.38 U                               | 1.5 U                                |           |  |
| 1,4-Dioxane  | µg/m <sup>3</sup> | 123-91-1    | 0.73 J             | 82                        | -  | -   | -   | -   | 0.73 J                               | 39 U                                 | 5.8 U                                | 0.29 U                               | 0.29 U                               | 1.2 U                                |           |  |
| 2,2,4-Trimethylpentane                               | µg/m <sup>3</sup> | 540-84-1    | 1800000            | -                         | -  | -   | -   | -   | 0.18 U                               | 25 U                                 | 33 J                                 | 0.18 U                               | 0.18 U                               | 1.2 J                                |           |  |
| 2-Butanone (Methyl ethyl ketone) (MEK)               | µg/m <sup>3</sup> | 78-93-3     | 35 J               | 73000                     | -  | -   | -   | -   | 1.2 J                                | 80 U                                 | 12 U                                 | 13                                   | 12                                   | 17                                   |           |  |
| 2-Chlorotoluene                                      | µg/m <sup>3</sup> | 95-49-8     | 1.5 J              | -                         | -  | -   | -   | -   | 0.33 U                               | 44 U                                 | 6.5 U                                | 0.33 U                               | 0.33 U                               | 1.3 U                                |           |  |
| 2-Hexanone   | µg/m <sup>3</sup> | 591-78-6    | 8.9 J              | 438                       | -  | -   | -   | -   | 0.24 U                               | 32 U                                 | 4.8 U                                | 2.9                                  | 2.7                                  | 2.6 J                                |           |  |
| 2-Phenylbutane (sec-Butylbenzene)                    | µg/m <sup>3</sup> | 135-98-8    | 47 J               | -                         | -  | -   | -   | -   | 0.35 U                               | 48 U                                 | 7.0 U                                | 0.35 U                               | 0.35 U                               | 1.4 U                                |           |  |
| 4-Ethyl toluene                                      | µg/m <sup>3</sup> | 622-96-8    | 72 J               | -                         | -  | -   | -   | -   | 0.32 U                               | 44 U                                 | 6.5 U                                | 0.32 U                               | 0.32 J                               | 1.3 U                                |           |  |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/m <sup>3</sup> | 108-10-1    | 4.3                | 43800                     | -  | -   | -   | -   | 4.3                                  | 110 U                                | 16 U                                 | 3.8                                  | 0.80 U                               | 3.2 U                                |           |  |
| Acetone  | µg/m <sup>3</sup> | 67-64-1     | 460                | 451000                    | -  | -   | -   | -   | 12                                   | 450 U                                | 67 U                                 | 66                                   | 56                                   | 77                                   |           |  |
| Allyl chloride                                       | µg/m <sup>3</sup> | 107-05-1    | ND                 | 15                        | -  | -   | -   | -   | 0.15 U                               | 20 U                                 | 3.0 U                                | 0.15 U                               | 0.15 U                               | 0.60 U                               |           |  |
| Benzene  | µg/m <sup>3</sup> | 71-43-2     | 110000             | 52                        | -  | -   | -   | -   | 0.45 J                               | 24 U                                 | 15                                   | 0.83                                 | 0.89                                 | 0.84 J                               |           |  |
| Benzyl chloride                                      | µg/m <sup>3</sup> | 100-44-7    | ND                 | 8                         | -  | -   | -   | -   | 0.40 U                               | 55 U                                 | 8.1 U                                | 0.40 U                               | 0.40 U                               | 1.6 U                                |           |  |
| Bromodichloromethane                                 | µg/m <sup>3</sup> | 75-27-4     | ND                 | 11                        | -  | -   | -   | -   | 0.29 U                               | 40 U                                 | 5.9 U                                | 0.29 U                               | 0.29 U                               | 1.2 U                                |           |  |
| Bromoform  | µg/m <sup>3</sup> | 75-25-2     | ND                 | 372                       | -  | -   | -   | -   | 0.50 U                               | 67 U                                 | 9.9 U                                | 0.50 U                               | 0.50 U                               | 2.0 U                                |           |  |
| Bromomethane (Methyl bromide)                        | µg/m <sup>3</sup> | 74-83-9     | 0.98 J             | 73                        | -  | -   | -   | -   | 0.12 U                               | 17 U                                 | 2.5 U                                | 0.12 U                               | 0.30 J                               | 0.98 J                               |           |  |
| Butane   | µg/m <sup>3</sup> | 106-97-8    | 8100               | -                         | -  | -   | -   | -   | 1.0                                  | 24 U                                 | 1700                                 | 73                                   | 67                                   | 3.1 J                                |           |  |
| Carbon disulfide                                     | µg/m <sup>3</sup> | 75-15-0     | 270 J              | 10200                     | -  | -   | -   | -   | 0.26 J                               | 13 U                                 | 13 J                                 | 7.6                                  | 8.5                                  | 14                                   |           |  |
| Carbon tetrachloride                                 | µg/m <sup>3</sup> | 56-23-5     | 36                 | 68                        | -  | -   | 680   | 6800                                      | 0.44 J                               | 32 U                                 | 4.8 U                                | 0.24 U                               | 0.24 U                               | 0.96 U                               |           |  |
| Chlorobenzene  | µg/m <sup>3</sup> | 108-90-7    | 110000             | 730                       | -  | -   | -   | -   | 0.23 U                               | 31 U                                 | 4.5 U                                | 0.37 J                               | 0.38 J                               | 0.90 U                               |           |  |
| Chlorodifluoromethane                                | µg/m <sup>3</sup> | 75-45-6     | 580                | 730000                    | -  | -   | -   | -   | 1.7                                  | 18 U                                 | 84                                   | 1.5 J                                | 7.2 J                                | 1.8 J                                |           |  |
| Chloroethane   | µg/m <sup>3</sup> | 75-00-3     | 550                | 146000                    | -  | -   | -   | -   | 0.092 U                              | 13 U                                 | 1.8 U                                | 0.42 J                               | 0.36 J                               | 0.37 U                               |           |  |
| Chloroform (Trichloromethane)                        | µg/m <sup>3</sup> | 67-66-3     | 110 J              | 18                        | -  | -   | 180   | 1800                                      | 0.19 U                               | 25 U                                 | 3.7 U                                | 0.37 J                               | 0.36 J                               | 1.8 J                                |           |  |
| Chloromethane (Methyl chloride)                      | µg/m <sup>3</sup> | 74-87-3     | 3.5                | 1310                      | -  | -   | -   | -   | 1.1                                  | 45 U                                 | 6.6 U                                | 0.33 U                               | 0.33 U                               | 1.8 J                                |           |  |
| cis-1,2-Dichloroethene                               | µg/m <sup>3</sup> | 156-59-2    | 1700               | -                         | -  | -   | -   | -   | 0.24 U                               | 770                                  | 16                                   | 22                                   | 23                                   | 0.95 U                               |           |  |
| cis-1,3-Dichloropropene                              | µg/m <sup>3</sup> | 10061-01-5  | ND                 | -                         | -  | -   | -   | -   | 0.34 U                               | 46 U                                 | 6.7 U                                | 0.34 U                               | 0.34 U                               | 1.3 U                                |           |  |
| Cyclohexane  | µg/m <sup>3</sup> | 110-82-7    | 230000             | 87600                     | -  | -   | -   | -   | 0.14 U                               | 19 U                                 | 35                                   | 10                                   | 10                                   | 0.55 U                               |           |  |
| Cymene (p-Isopropyltoluene)                          | µg/m <sup>3</sup> | 99-87-6     | 0.46 J             | -                         | -  | -   | -   | -   | 0.31 U                               | 43 U                                 | 6.3 U                                | 0.31 U                               | 0.31 U                               | 1.3 U                                |           |  |
| Dibromochloromethane                                 | µg/m <sup>3</sup> | 124-48-1    | ND                 | -                         | -  | -   | -   | -   | 0.36 U                               | 49 U                                 | 7.2 U                                | 0.36 U                               | 0                                    |                                      |           |  |

Table 3

**Analytical Results Summary and Commercial Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date | Parameters | Units | CAS#       | Max     | USEPA <sup>1</sup><br>Subslab VISL<br>Commercial | Accelerated<br>Response<br>Action Level<br>Commercial (8<br>hours) | Urgent<br>Response<br>Action Level<br>Commercial<br>(8 hours) | Chronic<br>Response<br>Action Level<br>Commercial | Removal<br>Management Level<br>Commercial | Near GP19<br>SVA-38443-082318-GL-033<br>8/23/2018 | GP20-18<br>SVA-38443-082318-GL-030<br>8/23/2018 | GP21-09<br>SVA-38443-081418-GL-001<br>8/14/2018 | GP22-13<br>SVA-38443-082318-GL-031<br>8/23/2018 | GP22-13<br>SVA-38443-082318-GL-032<br>8/23/2018 | GP23-13<br>SVA-38443-082218-GL-025<br>8/22/2018<br>Duplicate |    |     |     |                  |
|---|------------|-------|------------|---------|--|--|---|---|---|---|---|---|---|---|--|----|-----|-----|------------------|
|   |            |       |            |         |  |  |   |   |   | a   | b   | c   | d   | e   | 15 U   | 52 | 6.4 | 7.5 | 1.2 J            |
| Hexane                                      |            | µg/m³ | 110-54-3   | 630000  | 10200  | -  | -   | -   | -   | 0.72 J  |   |   |   |   |  |    |     |     |                  |
| Isopropyl alcohol                           |            | µg/m³ | 67-63-0    | 160     | 2920   | -  | -   | -   | -   | 0.62 J  | 82 J  | 14 J  | 1.9 J   | 3.1 J   |  |    |     |     | 3.6 J            |
| Isopropyl benzene                           |            | µg/m³ | 98-82-8    | 9800 J  | 5840   | -  | -   | -   | -   | 0.29 U  | 40 U  | 5.9 U   | 0.29 U  | 0.29 U  |  |    |     |     | 1.2 U            |
| m&p-Xylenes                                 |            | µg/m³ | M/P-XYLENE | 590000  | -  | -  | -   | -   | -   | 0.52 U  | 71 U  | 10 U  | 4.4   | 4.7   |  |    |     |     | 14               |
| Methyl methacrylate                         |            | µg/m³ | 80-62-6    | 1.4 J   | 10200  | -  | -   | -   | -   | 0.32 U  | 44 U  | 6.5 U   | 0.32 U  | 0.32 U  |  |    |     |     | 1.3 U            |
| Methyl tert butyl ether (MTBE)              |            | µg/m³ | 1634-04-4  | ND      | 1570   | -  | -   | -   | -   | 0.61 U  | 83 U  | 12 U  | 0.61 U  | 0.61 U  |  |    |     |     | 2.5 U            |
| Methylene chloride                          |            | µg/m³ | 75-09-2    | 40      | 8760   | -  | -   | -   | -   | 1.6 J   | 150 U   | 22 U  | 1.2 J   | 4.1 J   |  |    |     |     | 4.4 U            |
| Naphthalene                                 |            | µg/m³ | 91-20-3    | 1.5 J   | 12   | -  | -   | 120   | 1200                                      | 0.47 U  | 64 U  | 9.4 UJ  | 0.47 U  | 0.79 J  |  |    |     |     | 1.9 U            |
| N-Butylbenzene                              |            | µg/m³ | 104-51-8   | 16 J    | -  | -  | -   | -   | -   | 0.25 U  | 34 U  | 5.1 U   | 0.49 J  | 0.40 J  |  |    |     |     | 1.0 U            |
| N-Heptane                                   |            | µg/m³ | 142-82-5   | 1100000 | 5840   | -  | -   | -   | -   | 0.22 J  | 26 U  | 4.0 J   | 1.9 J   | 2.3   |  |    |     |     | 1.5 J            |
| N-Propylbenzene                             |            | µg/m³ | 103-65-1   | 95 J    | 14600  | -  | -   | -   | -   | 0.28 U  | 37 U  | 5.5 U   | 0.28 U  | 0.28 U  |  |    |     |     | 1.1 U            |
| o-Xylene                                    |            | µg/m³ | 95-47-6    | 180000  | 1460   | -  | -   | -   | -   | 0.26 U  | 36 U  | 5.3 U   | 1.3   | 1.2   |  |    |     |     | 5.1              |
| Styrene                                     |            | µg/m³ | 100-42-5   | 3.5     | 14600  | -  | -   | -   | -   | 0.25 U  | 34 U  | 4.9 U   | 0.25 J  | 0.27 J  |  |    |     |     | 0.99 U           |
| tert-Butyl alcohol                          |            | µg/m³ | 75-65-0    | 11 J    | -  | -  | -   | -   | -   | 0.12 U  | 16 U  | 2.3 U   | 2.3 J   | 1.9 J   |  |    |     |     | 4.1 J            |
| tert-Butylbenzene                           |            | µg/m³ | 98-06-6    | 5.7 J   | -  | -  | -   | -   | -   | 0.36 U  | 49 U  | 7.2 U   | 1.8 J   | 1.7 J   |  |    |     |     | 1.4 U            |
| Tetrachloroethene                           |            | µg/m³ | 127-18-4   | 550     | 584  | -  | -   | 5800  | 18000                                     | 0.78 J  | 37 U  | 5.4 U   | 1.9   | 1.3 J   |  |    |     |     | 1.1 U            |
| Tetrahydrofuran                             |            | µg/m³ | 109-99-9   | 4.7 J   | 29200  | -  | -   | -   | -   | 0.19 U  | 25 U  | 3.7 U   | 0.19 U  | 0.19 U  |  |    |     |     | 0.74 U           |
| Toluene                                     |            | µg/m³ | 108-88-3   | 1700000 | 73000  | -  | -   | -   | -   | 0.70 J  | 61 U  | 9.0 U   | 1.3   | 1.7   |  |    |     |     | 7.8              |
| trans-1,2-Dichloroethene                    |            | µg/m³ | 156-60-5   | 330     | -  | -  | -   | -   | -   | 0.20 U  | 37 J  | 4.0 U   | 3.5   | 3.5   |  |    |     |     | 1.8 J            |
| trans-1,3-Dichloropropene                   |            | µg/m³ | 10061-02-6 | ND      | -  | -  | -   | -   | -   | 0.22 U  | 30 U  | 4.4 U   | 0.22 U  | 0.22 U  |  |    |     |     | 0.87 U           |
| Trichloroethene                             |            | µg/m³ | 79-01-6    | 27000   | 29   | 290  | 880   | -   | -   | 0.19 U  | 670 <sup>abc</sup>                              | 3.9 U   | 2.7   | 2.3   |  |    |     |     | 60 <sup>ab</sup> |
| Trichlorofluoromethane (CFC-11)             |            | µg/m³ | 75-69-4    | 8.7     | -  | -  | -   | -   | -   | 1.2   | 18 U  | 2.7 U   | 0.13 U  | 0.36 J  |  |    |     |     | 7.3              |
| Trifluorotrichloroethane (CFC-113)          |            | µg/m³ | 76-13-1    | 6.6     | 73000  | -  | -   | -   | -   | 0.52 J  | 32 U  | 4.8 U   | 0.24 U  | 0.24 U  |  |    |     |     | 0.95 U           |
| Vinyl bromide (Bromoethene)                 |            | µg/m³ | 593-60-2   | ND      | 13   | -  | -   | -   | -   | 0.15 U  | 21 U  | 3.1 U   | 0.15 U  | 0.15 U  |  |    |     |     | 0.61 U           |
| Vinyl chloride                              |            | µg/m³ | 75-01-4    | 2500    | 93   | -  | -   | 930   | 9300                                      | 0.18 U  | 25 U  | 3.6 U   | 42  | 38  |  |    |     |     | 0.73 U           |
| Xylenes (total)                             |            | µg/m³ | 1330-20-7  | 770000  | 1460   | -  | -   | -   | -   | ND  | ND  | ND  | 5.7   | 5.9   |  |    |     |     | 19.1             |
| Total VOCs                                  |            | µg/m³ | -          | -       | -  | -  | -   | -   | -   | 30.84   | 7589  | 1970.3  | 290.25  | 279.35  |  |    |     |     | 797.52           |

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UJ - Not detected; associated reporting limit is estimated.

1 - USEPA sub slab or exterior soil gas concentration Vapor Intrusion Screening Levels (VISLs) based on cancer risk 1E 06 and hazard quotient (HQ)=0.1

2 - Ohio EPA accelerated and urgent response action levels and chronic response action level and removal management levels, from the Ohio EPA Guidance Document titled "Recommendations Regarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio", dated August 2016.

Table 3

**Analytical Results Summary and Commercial Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayon Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location                                      | GP24A-13<br>SVA-38443-082218-GL-024<br>8/22/2018 | GP24B-13<br>SVA-38443-082218-GL-023<br>8/22/2018 | GP25-18<br>SVA-38443-081418-GL-006<br>8/14/2018 | GP26-18<br>SVA-38443-081418-GL-005<br>8/14/2018  | GP27-18<br>SVA-38443-081518-GL-010<br>8/15/2018   | GP28-18<br>SVA-38443-081518-GL-007<br>8/15/2018                          |  |   |        |         |       |       |                   |                   |  |
|--|--|--|---|--|---|--|--|---|--------|---------|-------|-------|-------------------|-------------------|--|
| Sample ID  |  |  |   |  |   |  |  |   |        |         |       |       |                   |                   |  |
| Sample Date  |  |  |   |  |   |  |  |   |        |         |       |       |                   |                   |  |
| Parameters   | Units  | CAS#   | Max   | USEPA <sup>1</sup><br>Subslab VISL<br>Commercial | Ohio EPA <sup>2</sup><br>Accelerated<br>Response<br>Action Level<br>Commercial (8<br>hours) | Ohio EPA <sup>2</sup><br>Urgent<br>Response<br>Action Level<br>(8 hours) | Ohio EPA <sup>2</sup><br>Chronic<br>Response<br>Action Level<br>Commercial | Removal<br>Management Level<br>Commercial | a      | b       | c     | d     | e                 |                   |  |
| <b>Volatiles</b>                                     |  |  |   |  |   |  |  |   |        |         |       |       |                   |                   |  |
| 1,1,1-Trichloroethane                                | µg/m³  | 71-55-6  | 33  | 73000  | -   | -  | -  | -   | 2.2    | 0.69 J  | 3.8 J | 7.3 U | 19 U              | 7.4 U             |  |
| 1,1,2,2-Tetrachloroethane                            | µg/m³  | 79-34-5  | ND  | 7  | -   | -  | -  | -   | 0.42 U | 0.42 U  | 8.4 U | 19 U  | 48 U              | 19 U              |  |
| 1,1,2-Trichloroethane                                | µg/m³  | 79-00-5  | ND  | 3  | -   | -  | -  | -   | 0.29 U | 0.29 U  | 5.9 U | 13 U  | 34 U              | 13 U              |  |
| 1,1-Dichloroethane                                   | µg/m³  | 75-34-3  | 3200  | 256  | -   | -  | -  | -   | 0.11 U | 0.11 U  | 29    | 30 J  | 41 J              | 19 J              |  |
| 1,1-Dichloroethene                                   | µg/m³  | 75-35-4  | 24  | 2920   | -   | -  | -  | -   | 0.13 U | 0.13 U  | 24    | 6.1 U | 15 U              | 6.1 U             |  |
| 1,2,4-Trichlorobenzene                               | µg/m³  | 120-82-1   | ND  | 29   | -   | -  | -  | -   | 0.73 U | 0.73 UJ | 15 UJ | 33 UJ | 83 UJ             | 33 UJ             |  |
| 1,2,4-Trimethylbenzene                               | µg/m³  | 95-63-6  | 8400 J  | 876  | -   | -  | -  | -   | 2.6    | 1.6     | 12 J  | 22 J  | 120               | 14 U              |  |
| 1,2-Dibromoethane (Ethylene dibromide)               | µg/m³  | 106-93-4   | ND  | 1  | -   | -  | -  | -   | 0.34 U | 0.34 U  | 6.8 U | 15 U  | 38 U              | 15 U              |  |
| 1,2-Dichlorobenzene                                  | µg/m³  | 95-50-1  | ND  | 2920   | -   | -  | -  | -   | 0.42 U | 0.42 U  | 8.4 U | 19 U  | 48 U              | 19 U              |  |
| 1,2-Dichloroethane                                   | µg/m³  | 107-06-2   | 1   | 16   | -   | -  | -  | -   | 0.19 U | 0.19 U  | 3.8 U | 8.5 U | 22 U              | 8.7 U             |  |
| 1,2-Dichloropropane                                  | µg/m³  | 78-87-5  | ND  | 58   | -   | -  | -  | -   | 0.24 U | 0.24 U  | 4.8 U | 11 U  | 27 U              | 11 U              |  |
| 1,2-Dichlorotetrafluoroethane (CFC 114)              | µg/m³  | 76-14-2  | 310   | -  | -   | -  | -  | -   | 0.22 U | 0.22 U  | 28    | 32 J  | 25 U              | 10 U              |  |
| 1,3,5-Trimethylbenzene                               | µg/m³  | 108-67-8   | 52 J  | 876  | -   | -  | -  | -   | 0.58 J | 0.46 J  | 6.4 U | 14 U  | 52 J              | 15 U              |  |
| 1,3-Butadiene  | µg/m³  | 106-99-0   | ND  | 14   | -   | -  | -  | -   | 0.14 U | 0.14 U  | 2.8 U | 6.4 U | 16 U              | 6.4 U             |  |
| 1,3-Dichlorobenzene                                  | µg/m³  | 541-73-1   | 6.9   | -  | -   | -  | -  | -   | 2.7    | 0.39 U  | 7.8 U | 18 U  | 44 U              | 18 U              |  |
| 1,3-Dichloropropene                                  | µg/m³  | 542-75-6   | ND  | 102  | -   | -  | -  | -   | ND     | ND      | ND    | ND    | ND                | ND                |  |
| 1,4-Dichlorobenzene                                  | µg/m³  | 106-46-7   | 74 J  | 37   | -   | -  | -  | -   | 0.38 U | 0.38 U  | 7.7 U | 17 U  | 74 J <sup>a</sup> | 18 U              |  |
| 1,4-Dioxane  | µg/m³  | 123-91-1   | 0.73 J  | 82   | -   | -  | -  | -   | 0.29 U | 0.29 U  | 5.8 U | 13 U  | 33 U              | 13 U              |  |
| 2,2,4-Trimethylpentane                               | µg/m³  | 540-84-1   | 1800000   | -  | -   | -  | -  | -   | 0.41 J | 1.2 J   | 10 J  | 16 J  | 21 U              | 8.3 U             |  |
| 2-Butanone (Methyl ethyl ketone) (MEK)               | µg/m³  | 78-93-3  | 35 J  | 73000  | -   | -  | -  | -   | 18     | 5.3     | 12 U  | 26 U  | 67 U              | 27 U              |  |
| 2-Chlorotoluene                                      | µg/m³  | 95-49-8  | 1.5 J   | -  | -   | -  | -  | -   | 0.33 U | 0.33 U  | 6.5 U | 15 U  | 37 U              | 15 U              |  |
| 2-Hexanone   | µg/m³  | 591-78-6   | 8.9 J   | 438  | -   | -  | -  | -   | 2.8    | 0.90 J  | 4.8 U | 11 U  | 27 U              | 11 U              |  |
| 2-Phenylbutane (sec-Butylbenzene)                    | µg/m³  | 135-98-8   | 47 J  | -  | -   | -  | -  | -   | 0.35 U | 0.35 U  | 7.0 U | 16 U  | 40 U              | 38 J              |  |
| 4-Ethyl toluene                                      | µg/m³  | 622-96-8   | 72 J  | -  | -   | -  | -  | -   | 0.59 J | 0.52 J  | 6.5 U | 15 U  | 72 J              | 15 U              |  |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/m³  | 108-10-1   | 4.3   | 43800  | -   | -  | -  | -   | 3.9    | 1.1 J   | 16 U  | 36 U  | 91 U              | 36 U              |  |
| Acetone  | µg/m³  | 67-64-1  | 460   | 451000   | -   | -  | -  | -   | 75     | 22      | 67 U  | 150 U | 380 U             | 150 U             |  |
| Allyl chloride                                       | µg/m³  | 107-05-1   | ND  | 15   | -   | -  | -  | -   | 0.15 U | 0.15 U  | 3.0 U | 6.7 U | 17 U              | 6.8 U             |  |
| Benzene  | µg/m³  | 71-43-2  | 110000  | 52   | -   | -  | -  | -   | 1.2    | 0.43 J  | 3.6 U | 52    | 410 <sup>a</sup>  | 87 <sup>a</sup>   |  |
| Benzyl chloride                                      | µg/m³  | 100-44-7   | ND  | 8  | -   | -  | -  | -   | 0.40 U | 0.40 U  | 8.1 U | 18 U  | 46 U              | 18 U              |  |
| Bromodichloromethane                                 | µg/m³  | 75-27-4  | ND  | 11   | -   | -  | -  | -   | 0.29 U | 0.29 U  | 5.9 U | 13 U  | 34 U              | 13 U              |  |
| Bromoform  | µg/m³  | 75-25-2  | ND  | 372  | -   | -  | -  | -   | 0.50 U | 0.50 U  | 9.9 U | 22 U  | 56 U              | 23 U              |  |
| Bromomethane (Methyl bromide)                        | µg/m³  | 74-83-9  | 0.98 J  | 73   | -   | -  | -  | -   | 0.18 J | 0.12 U  | 2.5 U | 5.6 U | 14 U              | 5.7 U             |  |
| Butane   | µg/m³  | 106-97-8   | 8100  | -  | -   | -  | -  | -   | 0.96   | 2.3     | 720   | 1800  | 8100              | 3000              |  |
| Carbon disulfide                                     | µg/m³  | 75-15-0  | 270 J   | 10200  | -   | -  | -  | -   | 14     | 12      | 28 J  | 240   | 92 J              | 27 J              |  |
| Carbon tetrachloride                                 | µg/m³  | 56-23-5  | 36  | 68   | -   | -  | 680  | 6800                                      | 36     | 0.34 J  | 4.8 U | 11 U  | 27 U              | 11 U              |  |
| Chlorobenzene  | µg/m³  | 108-90-7   | 110000  | 730  | -   | -  | -  | -   | 0.23 J | 0.23 U  | 4.7 J | 22 J  | 9200 <sup>a</sup> | 1700 <sup>a</sup> |  |
| Chlorodifluoromethane                                | µg/m³  | 75-45-6  | 580   | 730000   | -   | -  | -  | -   | 1.8    | 17      | 45    | 48    | 15 U              | 12 J              |  |
| Chloroethane   | µg/m³  | 75-00-3  | 550   | 146000   | -   | -  | -  | -   | 0.14 J | 0.092 U | 1.8 U | 550   | 41 J              | 43                |  |
| Chloroform (Trichloromethane)                        | µg/m³  | 67-66-3  | 110 J   | 18   | -   | -  | 180  | 1800                                      | 0.29 J | 0.19 U  | 3.7 U | 8.3 U | 21 U              | 8.4 U             |  |
| Chloromethane (Methyl chloride)                      | µg/m³  | 74-87-3  | 3.5   | 1310   | -   | -  | -  | -   | 0.67 J | 0.47 J  | 6.6 U | 15 U  | 38 U              | 15 U              |  |
| cis-1,2-Dichloroethene                               | µg/m³  | 156-59-2   | 1700  | -  | -   | -  | -  | -   | 0.24 U | 0.24 U  | 4.8 U | 13 J  | 27 U              | 30 J              |  |
| cis-1,3-Dichloropropene                              | µg/m³  | 10061-01-5                                       | ND  | -  | -   | -  | -  | -   | 0.34 U | 0.34 U  | 6.7 U | 15 U  | 38 U              | 15 U              |  |
| Cyclohexane  | µg/m³  | 110-82-7   | 230000  | 87600  | -   | -  | -  | -   | 0.14 U | 0.53 J  | 24 J  | 72 J  | 350 J             | 150               |  |
| Cymene (p-Isopropyltoluene)                          | µg/m³  | 99-87-6  | 0.46 J  | -  | -   | -  | -  | -   | 0.31 U | 0.31 U  | 6.3 U | 14 U  | 36 U              | 14 U              |  |
| Dibromochloromethane                                 | µg/m³  | 124-48-1   | ND  | -  | -   | -  | -  | -   | 0.36 U | 0.36 U  | 7.2 U | 16 U  | 41 U              | 16 U              |  |
| Dichlorodifluoromethane (CFC-12)                     | µg/m³  | 75-71-8  | 570   | 1460   | -   | -  | -  | -   | 1.5    | 1.2     | 12 J  | 15 U  | 38 U              | 15 U              |  |
| Ethylbenzene   | µg/m³  | 100-41-4   | 140000  | 164  | -   | -  | -  | -   | 2.0    | 1.9     | 5.9 U | 13 U  | 150               | 13 U              |  |
| Hexachlorobutadiene                                  | µg/m³  | 87-68-3  | ND  | 19   | -   | -  | -  | -   | 0.83 U | 0.83 UJ | 17 UJ | 37 UJ | 95 UJ             | 38 UJ             |  |

Table 3

**Analytical Results Summary and Commercial Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location                    | Sample ID | Sample Date | GP24A-13<br>SVA-38443-082218-GL-024<br>8/22/2018 | GP24B-13<br>SVA-38443-082218-GL-023<br>8/22/2018 | GP25-18<br>SVA-38443-081418-GL-006<br>8/14/2018   | GP26-18<br>SVA-38443-081418-GL-005<br>8/14/2018               | GP27-18<br>SVA-38443-081518-GL-010<br>8/15/2018   | GP28-18<br>SVA-38443-081518-GL-007<br>8/15/2018 |
|------------------------------------|-----------|-------------|--|--|---|---|---|---|
| Parameters                         | Units     | CAS#        | Max  | USEPA <sup>1</sup><br>Subslab VISL<br>Commercial | Ohio EPA <sup>2</sup><br>Accelerated<br>Response<br>Action Level<br>Commercial (8<br>hours) | Urgent<br>Response<br>Action Level<br>Commercial<br>(8 hours) | Chronic<br>Response<br>Action Level<br>Commercial | Removal<br>Management Level<br>Commercial       |
|                                    |           |             |  | a  | b   | c   | d   | e   |
| Hexane                             | µg/m³     | 110-54-3    | 630000   | 10200  | -   | -   | -   | 0.76 J  |
| Isopropyl alcohol                  | µg/m³     | 67-63-0     | 160  | 2920   | -   | -   | -   | 81  |
| Isopropyl benzene                  | µg/m³     | 98-82-8     | 9800 J   | 5840   | -   | -   | -   | 1.4 J   |
| m&p-Xylenes                        | µg/m³     | M/P-XYLENE  | 590000   | -  | -   | -   | -   | 8.6   |
| Methyl methacrylate                | µg/m³     | 80-62-6     | 1.4 J  | 10200  | -   | -   | -   | 0.32 U  |
| Methyl tert butyl ether (MTBE)     | µg/m³     | 1634-04-4   | ND   | 1570   | -   | -   | -   | 0.61 U  |
| Methylene chloride                 | µg/m³     | 75-09-2     | 40   | 8760   | -   | -   | -   | 1.1 U   |
| Naphthalene                        | µg/m³     | 91-20-3     | 1.5 J  | 12   | -   | -   | 120   | 1200  |
| N-Butylbenzene                     | µg/m³     | 104-51-8    | 16 J   | -  | -   | -   | -   | 0.31 J  |
| N-Heptane                          | µg/m³     | 142-82-5    | 1100000  | 5840   | -   | -   | -   | 1.1 J   |
| N-Propylbenzene                    | µg/m³     | 103-65-1    | 95 J   | 14600  | -   | -   | -   | 0.40 J  |
| o-Xylene                           | µg/m³     | 95-47-6     | 180000   | 1460   | -   | -   | -   | 2.9   |
| Styrene                            | µg/m³     | 100-42-5    | 3.5  | 14600  | -   | -   | -   | 0.64 J  |
| tert-Butyl alcohol                 | µg/m³     | 75-65-0     | 11 J   | -  | -   | -   | -   | 4.5 J   |
| tert-Butylbenzene                  | µg/m³     | 98-06-6     | 5.7 J  | -  | -   | -   | -   | 0.36 U  |
| Tetrachloroethene                  | µg/m³     | 127-18-4    | 550  | 584  | -   | -   | 5800  | 18000   |
| Tetrahydrofuran                    | µg/m³     | 109-99-9    | 4.7 J  | 29200  | -   | -   | -   | 2.3 J   |
| Toluene                            | µg/m³     | 108-88-3    | 1700000  | 73000  | -   | -   | -   | 4.3   |
| trans-1,2-Dichloroethene           | µg/m³     | 156-60-5    | 330  | -  | -   | -   | -   | 2.3   |
| trans-1,3-Dichloropropene          | µg/m³     | 10061-02-6  | ND   | -  | -   | -   | -   | 0.22 U  |
| Trichloroethene                    | µg/m³     | 79-01-6     | 27000  | 29   | 290   | 880   | -   | 0.75 J  |
| Trichlorofluoromethane (CFC-11)    | µg/m³     | 75-69-4     | 8.7  | -  | -   | -   | -   | 7.1   |
| Trifluorotrichloroethane (CFC-113) | µg/m³     | 76-13-1     | 6.6  | 73000  | -   | -   | -   | 0.66 J  |
| Vinyl bromide (Bromoethene)        | µg/m³     | 593-60-2    | ND   | 13   | -   | -   | -   | 0.15 U  |
| Vinyl chloride                     | µg/m³     | 75-01-4     | 2500   | 93   | -   | -   | 930   | 9300  |
| Xylenes (total)                    | µg/m³     | 1330-20-7   | 770000   | 1460   | -   | -   | -   | 11.5  |
| Total VOCs                         | µg/m³     | -           | -  | -  | -   | -   | -   | 298.57  |
|                                    |           |             |  |  |   |   |   | 141.02  |
|                                    |           |             |  |  |   |   |   | 1166.1  |
|                                    |           |             |  |  |   |   |   | 3459.5  |
|                                    |           |             |  |  |   |   |   | 25557   |
|                                    |           |             |  |  |   |   |   | 7031  |

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UJ - Not detected; associated reporting limit is estimated.

1 - USEPA sub slab or exterior soil gas concentration Vapor Intrusion Screening Levels (VISLs) based on cancer risk 1E 06 and hazard quotient (HQ)=0.1

2 - Ohio EPA accelerated and urgent response action levels and chronic response action level and removal management levels, from the Ohio EPA Guidance Document titled "Recommendations Regarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio", dated August 2016.

Table 3

**Analytical Results Summary and Commercial Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayon Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location                                      | Sample ID | Sample Date | USEPA <sup>1</sup> | Ohio EPA <sup>2</sup>     | GP28-18  | GP29-18   | GP30-18   | GP31-18                                   | GP32-18                              | GP33-18                              |                                      |                                      |                                      |                                      |
|--|-----------|-------------|--------------------|---------------------------|--|---|---|---|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Parameters   | Units     | CAS#        | Max                | Subslab VSL<br>Commercial | Accelerated<br>Response<br>Action Level<br>Commercial (8<br>hours) | Urgent<br>Response<br>Action Level<br>Commercial<br>(8 hours) | Chronic<br>Response<br>Action Level<br>Commercial | Removal<br>Management Level<br>Commercial | 8/15/2018<br>SVA-38443-081518-GL-008 | 8/15/2018<br>SVA-38443-081518-GL-009 | 8/22/2018<br>SVA-38443-082218-GL-027 | 8/22/2018<br>SVA-38443-082218-GL-026 | 8/24/2018<br>SVA-38443-082418-GL-035 | 8/23/2018<br>SVA-38443-082318-GL-029 |
| <b>Volatiles</b>                                     |           |             |                    | a                         | b  | c   | d   | e   | Duplicate                            |                                      |                                      |                                      |                                      |                                      |
| 1,1,1-Trichloroethane                                | µg/m³     | 71-55-6     | 33                 | 73000                     | -  | -   | -   | -   | 6.4 U                                | 7.8 J                                | 0.16 U                               | 44 U                                 | 15                                   | 0.16 U                               |
| 1,1,2,2-Tetrachloroethane                            | µg/m³     | 79-34-5     | ND                 | 7                         | -  | -   | -   | -   | 16 U                                 | 8.4 U                                | 0.42 U                               | 110 U                                | 42 U                                 | 0.42 U                               |
| 1,1,2-Trichloroethane                                | µg/m³     | 79-00-5     | ND                 | 3                         | -  | -   | -   | -   | 11 U                                 | 5.9 U                                | 0.29 U                               | 79 U                                 | 29 U                                 | 0.29 U                               |
| 1,1-Dichloroethane                                   | µg/m³     | 75-34-3     | 3200               | 256                       | -  | -   | -   | -   | 20 J                                 | 4.7 J                                | 0.11 U                               | 28 U                                 | 1.5 J                                | 0.11 U                               |
| 1,1-Dichloroethene                                   | µg/m³     | 75-35-4     | 24                 | 2920                      | -  | -   | -   | -   | 5.2 U                                | 2.7 U                                | 0.13 U                               | 36 U                                 | 13 U                                 | 0.13 U                               |
| 1,2,4-Trichlorobenzene                               | µg/m³     | 120-82-1    | ND                 | 29                        | -  | -   | -   | -   | 28 UU                                | 15 UU                                | 0.73 U                               | 190 U                                | 73 U                                 | 0.73 UJ                              |
| 1,2,4-Trimethylbenzene                               | µg/m³     | 95-63-6     | 8400 J             | 876                       | -  | -   | -   | -   | 12 U                                 | 14 J                                 | 3.2                                  | 83 U                                 | 3.1 U                                | 1.7                                  |
| 1,2-Dibromoethane (Ethylene dibromide)               | µg/m³     | 106-93-4    | ND                 | 1                         | -  | -   | -   | -   | 13 U                                 | 6.8 U                                | 0.34 U                               | 91 U                                 | 3.4 U                                | 0.34 U                               |
| 1,2-Dichlorobenzene                                  | µg/m³     | 95-50-1     | ND                 | 2920                      | -  | -   | -   | -   | 16 U                                 | 8.4 U                                | 0.42 U                               | 110 U                                | 42 U                                 | 0.42 U                               |
| 1,2-Dichloroethane                                   | µg/m³     | 107-06-2    | 1                  | 16                        | -  | -   | -   | -   | 7.4 U                                | 3.8 U                                | 0.19 U                               | 51 U                                 | 19 U                                 | 0.19 U                               |
| 1,2-Dichloropropane                                  | µg/m³     | 78-87-5     | ND                 | 58                        | -  | -   | -   | -   | 9.3 U                                | 4.8 U                                | 0.24 U                               | 64 U                                 | 2.4 U                                | 0.24 U                               |
| 1,2-Dichlorotetrafluoroethane (CFC 114)              | µg/m³     | 76-14-2     | 310                | -                         | -  | -   | -   | -   | 8.7 U                                | 92                                   | 0.22 U                               | 60 U                                 | 11 J                                 | 0.22 U                               |
| 1,3,5-Trimethylbenzene                               | µg/m³     | 108-67-8    | 52 J               | 876                       | -  | -   | -   | -   | 12 U                                 | 7.6 J                                | 0.85 J                               | 86 U                                 | 3.2 U                                | 0.37 J                               |
| 1,3-Butadiene  | µg/m³     | 106-99-0    | ND                 | 14                        | -  | -   | -   | -   | 5.5 U                                | 2.8 U                                | 0.14 U                               | 38 U                                 | 1.4 U                                | 0.14 U                               |
| 1,3-Dichlorobenzene                                  | µg/m³     | 541-73-1    | 6.9                | -                         | -  | -   | -   | -   | 15 U                                 | 7.8 U                                | 6.9                                  | 100 U                                | 39 U                                 | 2.0                                  |
| 1,3-Dichloropropene                                  | µg/m³     | 542-75-6    | ND                 | 102                       | -  | -   | -   | -   | ND                                   | ND                                   | ND                                   | ND                                   | ND                                   | ND                                   |
| 1,4-Dichlorobenzene                                  | µg/m³     | 106-46-7    | 74 J               | 37                        | -  | -   | -   | -   | 15 U                                 | 7.7 U                                | 0.38 U                               | 100 U                                | 38 U                                 | 0.38 U                               |
| 1,4-Dioxane  | µg/m³     | 123-91-1    | 0.73 J             | 82                        | -  | -   | -   | -   | 11 U                                 | 5.8 U                                | 0.43 J                               | 77 U                                 | 29 U                                 | 0.29 U                               |
| 2,2,4-Trimethylpentane                               | µg/m³     | 540-84-1    | 1800000            | -                         | -  | -   | -   | -   | 7.1 U                                | 3.6 U                                | 0.90 J                               | 49 U                                 | 1.8 U                                | 1.9 J                                |
| 2-Butanone (Methyl ethyl ketone) (MEK)               | µg/m³     | 78-93-3     | 35 J               | 73000                     | -  | -   | -   | -   | 23 U                                 | 12 U                                 | 12                                   | 160 U                                | 59 U                                 | 5.4                                  |
| 2-Chlorotoluene                                      | µg/m³     | 95-49-8     | 1.5 J              | -                         | -  | -   | -   | -   | 13 U                                 | 6.5 U                                | 0.33 U                               | 87 U                                 | 3.3 U                                | 0.33 U                               |
| 2-Hexanone   | µg/m³     | 591-78-6    | 8.9 J              | 438                       | -  | -   | -   | -   | 9.2 U                                | 4.8 U                                | 1.7 J                                | 64 U                                 | 2.4 U                                | 0.91 J                               |
| 2-Phenylbutane (sec-Butylbenzene)                    | µg/m³     | 135-98-8    | 47 J               | -                         | -  | -   | -   | -   | 47 J                                 | 30 J                                 | 0.35 U                               | 94 U                                 | 3.5 U                                | 0.35 U                               |
| 4-Ethyl toluene                                      | µg/m³     | 622-96-8    | 72 J               | -                         | -  | -   | -   | -   | 13 U                                 | 11 J                                 | 0.75 J                               | 87 U                                 | 3.2 U                                | 0.39 J                               |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/m³     | 108-10-1    | 4.3                | 43800                     | -  | -   | -   | -   | 31 U                                 | 16 U                                 | 1.1 J                                | 210 U                                | 80 U                                 | 1.0 J                                |
| Acetone  | µg/m³     | 67-64-1     | 460                | 451000                    | -  | -   | -   | -   | 130 U                                | 67 U                                 | 120                                  | 890 U                                | 37 J                                 | 28                                   |
| Allyl chloride                                       | µg/m³     | 107-05-1    | ND                 | 15                        | -  | -   | -   | -   | 5.8 U                                | 3.0 U                                | 0.15 U                               | 40 U                                 | 1.5 U                                | 0.15 U                               |
| Benzene  | µg/m³     | 71-43-2     | 110000             | 52                        | -  | -   | -   | -   | 120 <sup>a</sup>                     | 40                                   | 1.5                                  | 48 U                                 | 3.6 J                                | 0.67                                 |
| Benzyl chloride                                      | µg/m³     | 100-44-7    | ND                 | 8                         | -  | -   | -   | -   | 16 U                                 | 8.1 U                                | 0.40 U                               | 110 U                                | 40 U                                 | 0.40 U                               |
| Bromodichloromethane                                 | µg/m³     | 75-27-4     | ND                 | 11                        | -  | -   | -   | -   | 11 U                                 | 5.9 U                                | 0.29 U                               | 79 U                                 | 29 U                                 | 0.29 U                               |
| Bromoform  | µg/m³     | 75-25-2     | ND                 | 372                       | -  | -   | -   | -   | 19 U                                 | 9.9 U                                | 0.50 U                               | 130 U                                | 50 U                                 | 0.50 U                               |
| Bromomethane (Methyl bromide)                        | µg/m³     | 74-83-9     | 0.98 J             | 73                        | -  | -   | -   | -   | 4.8 U                                | 2.5 U                                | 0.12 U                               | 33 U                                 | 12 U                                 | 0.12 U                               |
| Butane   | µg/m³     | 106-97-8    | 8100               | -                         | -  | -   | -   | -   | 3700                                 | 4800                                 | 1.4                                  | 46 U                                 | 5.1 J                                | 1.5                                  |
| Carbon disulfide                                     | µg/m³     | 75-15-0     | 270 J              | 10200                     | -  | -   | -   | -   | 38 J                                 | 17 J                                 | 65                                   | 270 J                                | 69                                   | 1.6                                  |
| Carbon tetrachloride                                 | µg/m³     | 56-23-5     | 36                 | 68                        | -  | -   | 680   | 6800                                      | 9.3 U                                | 4.8 U                                | 0.27 J                               | 64 U                                 | 2.4 U                                | 0.39 J                               |
| Chlorobenzene  | µg/m³     | 108-90-7    | 110000             | 730                       | -  | -   | -   | -   | 2200 <sup>a</sup>                    | 4.5 U                                | 0.23 U                               | 60 U                                 | 2.3 U                                | 0.23 U                               |
| Chlorodifluoromethane                                | µg/m³     | 75-45-6     | 580                | 730000                    | -  | -   | -   | -   | 17 J                                 | 14 J                                 | 3.0                                  | 35 U                                 | 4.7 J                                | 7.8                                  |
| Chloroethane   | µg/m³     | 75-00-3     | 550                | 146000                    | -  | -   | -   | -   | 44                                   | 3.8 J                                | 0.27 J                               | 25 U                                 | 0.92 U                               | 0.092 U                              |
| Chloroform (Trichloromethane)                        | µg/m³     | 67-66-3     | 110 J              | 18                        | -  | -   | 180   | 1800                                      | 7.2 U                                | 3.7 U                                | 0.19 U                               | 110 J <sup>a</sup>                   | 8.0 J                                | 0.96                                 |
| Chloromethane (Methyl chloride)                      | µg/m³     | 74-87-3     | 3.5                | 1310                      | -  | -   | -   | -   | 13 U                                 | 6.6 U                                | 3.5                                  | 89 U                                 | 3.3 U                                | 0.89 J                               |
| cis-1,2-Dichloroethene                               | µg/m³     | 156-59-2    | 1700               | -                         | -  | -   | -   | -   | 34                                   | 95                                   | 0.24 U                               | 1000                                 | 4.7 J                                | 0.24 U                               |
| cis-1,3-Dichloropropene                              | µg/m³     | 10061-01-5  | ND                 | -                         | -  | -   | -   | -   | 13 U                                 | 6.7 U                                | 0.34 U                               | 90 U                                 | 3.4 U                                | 0.34 U                               |
| Cyclohexane  | µg/m³     | 110-82-7    | 230000             | 87600                     | -  | -   | -   | -   | 210                                  | 36                                   | 0.14 U                               | 37 U                                 | 1.4 U                                | 0.14 U                               |
| Cymene (p-Isopropyltoluene)                          | µg/m³     | 99-87-6     | 0.46 J             | -                         | -  | -   | -   | -   | 12 U                                 | 6.3 U                                | 0.31 U                               | 84 U                                 | 3.1 U                                | 0.31 U                               |
| Dibromochloromethane                                 | µg/m³     | 124-48-1    | ND                 | -                         | -  | -   | -   | -   | 14 U                                 | 7.2 U                                | 0.36 U                               | 96 U                                 | 3.6 U                                | 0.36 U                               |
| Dichlorodifluoromethane (CFC-12)                     | µg/m³     | 75-71-8     | 570                | 1460                      | -  | -   | -   | -   | 13 U                                 | 51                                   | 0.46 J                               | 90 U                                 | 29                                   | 1.3                                  |
| Ethylbenzene   | µg/m³     | 100-41-4    | 140000             | 164                       | -  | -   | -   | -   | 13 J                                 | 14 J                                 | 2.7                                  | 79 U                                 | 3.0 U                                | 1.1                                  |
| Hexachlorobutadiene                                  | µg/m³     | 87-68-3     | ND                 | 19                        | -  | -   | -   | -   | 32 UU                                | 17 UU                                | 0.83 U                               | 220 U                                | 83 U                                 | 0.83 UJ                              |

Table 3

**Analytical Results Summary and Commercial Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location                    | Sample ID | Sample Date | GP28-18<br>SVA-38443-081518-GL-008<br>8/15/2018 | GP29-18<br>SVA-38443-081518-GL-009<br>8/15/2018  | GP30-18<br>SVA-38443-082218-GL-027<br>8/22/2018   | GP31-18<br>SVA-38443-082218-GL-026<br>8/22/2018               | GP32-18<br>SVA-38443-082418-GL-035<br>8/24/2018   | GP33-18<br>SVA-38443-082318-GL-029<br>8/23/2018 |                  |
|------------------------------------|-----------|-------------|---|--|---|---|---|---|------------------|
| Parameters                         | Units     | CAS#        | Max   | USEPA <sup>1</sup><br>Subslab VISL<br>Commercial | Ohio EPA <sup>2</sup><br>Accelerated<br>Response<br>Action Level<br>Commercial (8<br>hours) | Urgent<br>Response<br>Action Level<br>Commercial<br>(8 hours) | Chronic<br>Response<br>Action Level<br>Commercial | Removal<br>Management Level<br>Commercial       | Duplicate        |
|                                    |           |             |   | a  | b   | c   | d   | e   |                  |
| Hexane                             | µg/m³     | 110-54-3    | 630000  | 10200  | -   | -   | -   | 1400  | 790              |
| Isopropyl alcohol                  | µg/m³     | 67-63-0     | 160   | 2920   | -   | -   | -   | 9.0 U   | 5.1 J            |
| Isopropyl benzene                  | µg/m³     | 98-82-8     | 9800 J  | 5840   | -   | -   | -   | 92  | 74               |
| m&p-Xylenes                        | µg/m³     | M/P-XYLENE  | 590000  | -  | -   | -   | -   | 92  | 15 J             |
| Methyl methacrylate                | µg/m³     | 80-62-6     | 1.4 J   | 10200  | -   | -   | -   | 13 U  | 6.5 U            |
| Methyl tert butyl ether (MTBE)     | µg/m³     | 1634-04-4   | ND  | 1570   | -   | -   | -   | 24 U  | 12 U             |
| Methylene chloride                 | µg/m³     | 75-09-2     | 40  | 8760   | -   | -   | -   | 43 U  | 22 U             |
| Naphthalene                        | µg/m³     | 91-20-3     | 1.5 J   | 12   | -   | -   | 120   | 1200  | 18 UJ            |
| N-Butylbenzene                     | µg/m³     | 104-51-8    | 16 J  | -  | -   | -   | -   | 16 J  | 12 J             |
| N-Heptane                          | µg/m³     | 142-82-5    | 1100000   | 5840   | -   | -   | -   | 520   | 400              |
| N-Propylbenzene                    | µg/m³     | 103-65-1    | 95 J  | 14600  | -   | -   | -   | 11 U  | 66               |
| o-Xylene                           | µg/m³     | 95-47-6     | 180000  | 1460   | -   | -   | -   | 15 J  | 13 J             |
| Styrene                            | µg/m³     | 100-42-5    | 3.5   | 14600  | -   | -   | -   | 9.6 U   | 4.9 U            |
| tert-Butyl alcohol                 | µg/m³     | 75-65-0     | 11 J  | -  | -   | -   | -   | 4.5 U   | 3.6 J            |
| tert-Butylbenzene                  | µg/m³     | 98-06-6     | 5.7 J   | -  | -   | -   | -   | 14 U  | 7.2 U            |
| Tetrachloroethene                  | µg/m³     | 127-18-4    | 550   | 584  | -   | -   | 5800  | 18000   | 11 U             |
| Tetrahydrofuran                    | µg/m³     | 109-99-9    | 4.7 J   | 29200  | -   | -   | -   | 7.2 U   | 3.7 U            |
| Toluene                            | µg/m³     | 108-88-3    | 1700000   | 73000  | -   | -   | -   | 31  | 23               |
| trans-1,2-Dichloroethene           | µg/m³     | 156-60-5    | 330   | -  | -   | -   | -   | 28 J  | 5.8 J            |
| trans-1,3-Dichloropropene          | µg/m³     | 10061-02-6  | ND  | -  | -   | -   | -   | 8.5 U   | 4.4 U            |
| Trichloroethene                    | µg/m³     | 79-01-6     | 27000   | 29   | 290   | 880   | -   | 7.5 U   | 17 J             |
| Trichlorofluoromethane (CFC-11)    | µg/m³     | 75-69-4     | 8.7   | -  | -   | -   | -   | 5.2 U   | 2.7 U            |
| Trifluorotrichloroethane (CFC-113) | µg/m³     | 76-13-1     | 6.6   | 73000  | -   | -   | -   | 9.2 U   | 4.8 U            |
| Vinyl bromide (Bromoethene)        | µg/m³     | 593-60-2    | ND  | 13   | -   | -   | -   | 5.9 U   | 3.1 U            |
| Vinyl chloride                     | µg/m³     | 75-01-4     | 2500  | 93   | -   | -   | 930   | 9300  | 200 <sup>a</sup> |
| Xylenes (total)                    | µg/m³     | 1330-20-7   | 770000  | 1460   | -   | -   | -   | 107   | 28               |
| Total VOCs                         | µg/m³     | -           | -   | -  | -   | -   | -   | 8944  | 6811.4           |
|                                    |           |             |   |  |   |   |   |   | 375.52           |
|                                    |           |             |   |  |   |   |   |   | 28830            |
|                                    |           |             |   |  |   |   |   |   | 841.7            |
|                                    |           |             |   |  |   |   |   |   | 131.45           |

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UJ - Not detected; associated reporting limit is estimated.

1 - USEPA sub slab or exterior soil gas concentration Vapor Intrusion Screening Levels (VISLs) based on cancer risk 1E 06 and hazard quotient (HQ)=0.1

2 - Ohio EPA accelerated and urgent response action levels and chronic response action level and removal management levels, from the Ohio EPA Guidance Document titled "Recommendations Regarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio", dated August 2016.

Table 3

**Analytical Results Summary and Commercial Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayon Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date          | Parameters | Units      | CAS#    | Max    | USEPA <sup>1</sup><br>Subslab VSL<br>Commercial | Accelerated<br>Response<br>Action Level<br>Commercial (8<br>hours) | Urgent<br>Response<br>Action Level<br>Commercial (8<br>hours) | Chronic<br>Response<br>Action Level<br>Commercial | Ohio EPA <sup>2</sup><br>Action Level<br>Commercial | Removal<br>Management Level<br>Commercial | GP34-18<br>SVA-38443-082218-GL-022<br>8/22/2018 |
|--|------------|------------|---------|--------|---|--|---|---|---|---|---|
|  |            |            |         |        | a   | b  | c   | d   | e   |   |   |
| <b>Volatiles</b>                                     |            |            |         |        |   |  |   |   |   |   |   |
| 1,1,1-Trichloroethane                                | µg/m³      | 71-55-6    | 33      | 73000  | -   | -  | -   | -   | -   | 1.8                                       |   |
| 1,1,2,2-Tetrachloroethane                            | µg/m³      | 79-34-5    | ND      | 7      | -   | -  | -   | -   | -   | 0.42 U                                    |   |
| 1,1,2-Trichloroethane                                | µg/m³      | 79-00-5    | ND      | 3      | -   | -  | -   | -   | -   | 0.29 U                                    |   |
| 1,1-Dichloroethane                                   | µg/m³      | 75-34-3    | 3200    | 256    | -   | -  | -   | -   | -   | 0.11 U                                    |   |
| 1,1-Dichloroethene                                   | µg/m³      | 75-35-4    | 24      | 2920   | -   | -  | -   | -   | -   | 0.13 U                                    |   |
| 1,2,4-Trichlorobenzene                               | µg/m³      | 120-82-1   | ND      | 29     | -   | -  | -   | -   | -   | 0.73 UJ                                   |   |
| 1,2,4-Trimethylbenzene                               | µg/m³      | 95-63-6    | 8400 J  | 876    | -   | -  | -   | -   | -   | 1.8                                       |   |
| 1,2-Dibromoethane (Ethylene dibromide)               | µg/m³      | 106-93-4   | ND      | 1      | -   | -  | -   | -   | -   | 0.34 U                                    |   |
| 1,2-Dichlorobenzene                                  | µg/m³      | 95-50-1    | ND      | 2920   | -   | -  | -   | -   | -   | 0.42 U                                    |   |
| 1,2-Dichloroethane                                   | µg/m³      | 107-06-2   | 1       | 16     | -   | -  | -   | -   | -   | 0.19 U                                    |   |
| 1,2-Dichloropropane                                  | µg/m³      | 78-87-5    | ND      | 58     | -   | -  | -   | -   | -   | 0.24 U                                    |   |
| 1,2-Dichlorotetrafluoroethane (CFC 114)              | µg/m³      | 76-14-2    | 310     | -      | -   | -  | -   | -   | -   | 0.22 U                                    |   |
| 1,3,5-Trimethylbenzene                               | µg/m³      | 108-67-8   | 52 J    | 876    | -   | -  | -   | -   | -   | 0.39 J                                    |   |
| 1,3-Butadiene  | µg/m³      | 106-99-0   | ND      | 14     | -   | -  | -   | -   | -   | 0.14 U                                    |   |
| 1,3-Dichlorobenzene                                  | µg/m³      | 541-73-1   | 6 9     | -      | -   | -  | -   | -   | -   | 2.3                                       |   |
| 1,3-Dichloropropene                                  | µg/m³      | 542-75-6   | ND      | 102    | -   | -  | -   | -   | -   | ND  |   |
| 1,4-Dichlorobenzene                                  | µg/m³      | 106-46-7   | 74 J    | 37     | -   | -  | -   | -   | -   | 0.38 U                                    |   |
| 1,4-Dioxane  | µg/m³      | 123-91-1   | 0.73 J  | 82     | -   | -  | -   | -   | -   | 0.29 U                                    |   |
| 2,2,4-Trimethylpentane                               | µg/m³      | 540-84-1   | 1800000 | -      | -   | -  | -   | -   | -   | 0.88 J                                    |   |
| 2-Butanone (Methyl ethyl ketone) (MEK)               | µg/m³      | 78-93-3    | 35 J    | 73000  | -   | -  | -   | -   | -   | 7.8                                       |   |
| 2-Chlorotoluene                                      | µg/m³      | 95-49-8    | 1.5 J   | -      | -   | -  | -   | -   | -   | 0.33 U                                    |   |
| 2-Hexanone   | µg/m³      | 591-78-6   | 8.9 J   | 438    | -   | -  | -   | -   | -   | 1.3 J                                     |   |
| 2-Phenylbutane (sec-Butylbenzene)                    | µg/m³      | 135-98-8   | 47 J    | -      | -   | -  | -   | -   | -   | 0.35 U                                    |   |
| 4-Ethyl toluene                                      | µg/m³      | 622-96-8   | 72 J    | -      | -   | -  | -   | -   | -   | 0.46 J                                    |   |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/m³      | 108-10-1   | 4 3     | 43800  | -   | -  | -   | -   | -   | 0.90 J                                    |   |
| Acetone  | µg/m³      | 67-64-1    | 460     | 451000 | -   | -  | -   | -   | -   | 35  |   |
| Allyl chloride                                       | µg/m³      | 107-05-1   | ND      | 15     | -   | -  | -   | -   | -   | 0.15 U                                    |   |
| Benzene  | µg/m³      | 71-43-2    | 110000  | 52     | -   | -  | -   | -   | -   | 0.81                                      |   |
| Benzyl chloride                                      | µg/m³      | 100-44-7   | ND      | 8      | -   | -  | -   | -   | -   | 0.40 U                                    |   |
| Bromodichloromethane                                 | µg/m³      | 75-27-4    | ND      | 11     | -   | -  | -   | -   | -   | 0.29 U                                    |   |
| Bromoform  | µg/m³      | 75-25-2    | ND      | 372    | -   | -  | -   | -   | -   | 0.50 U                                    |   |
| Bromomethane (Methyl bromide)                        | µg/m³      | 74-83-9    | 0.98 J  | 73     | -   | -  | -   | -   | -   | 0.12 U                                    |   |
| Butane   | µg/m³      | 106-97-8   | 8100    | -      | -   | -  | -   | -   | -   | 0.82 J                                    |   |
| Carbon disulfide                                     | µg/m³      | 75-15-0    | 270 J   | 10200  | -   | -  | -   | -   | -   | 21  |   |
| Carbon tetrachloride                                 | µg/m³      | 56-23-5    | 36      | 68     | -   | -  | 680   | 6800  | 6800  | 0.24 U                                    |   |
| Chlorobenzene  | µg/m³      | 108-90-7   | 110000  | 730    | -   | -  | -   | -   | -   | 0.23 U                                    |   |
| Chlorodifluoromethane                                | µg/m³      | 75-45-6    | 580     | 730000 | -   | -  | -   | -   | -   | 4.6                                       |   |
| Chloroethane   | µg/m³      | 75-00-3    | 550     | 146000 | -   | -  | -   | -   | -   | 0.092 U                                   |   |
| Chloroform (Trichloromethane)                        | µg/m³      | 67-66-3    | 110 J   | 18     | -   | -  | 180   | 1800  | 1800  | 0.24 J                                    |   |
| Chloromethane (Methyl chloride)                      | µg/m³      | 74-87-3    | 3 5     | 1310   | -   | -  | -   | -   | -   | 1.5                                       |   |
| cis-1,2-Dichloroethene                               | µg/m³      | 156-59-2   | 1700    | -      | -   | -  | -   | -   | -   | 0.24 U                                    |   |
| cis-1,3-Dichloropropene                              | µg/m³      | 10061-01-5 | ND      | -      | -   | -  | -   | -   | -   | 0.34 U                                    |   |
| Cyclohexane  | µg/m³      | 110-82-7   | 230000  | 87600  | -   | -  | -   | -   | -   | 0.20 J                                    |   |
| Cymene (p-Isopropyltoluene)                          | µg/m³      | 99-87-6    | 0.46 J  | -      | -   | -  | -   | -   | -   | 0.31 U                                    |   |
| Dibromochloromethane                                 | µg/m³      | 124-48-1   | ND      | -      | -   | -  | -   | -   | -   | 0.36 U                                    |   |
| Dichlorodifluoromethane (CFC-12)                     | µg/m³      | 75-71-8    | 570     | 1460   | -   | -  | -   | -   | -   | 1.8                                       |   |
| Ethylbenzene   | µg/m³      | 100-41-4   | 140000  | 164    | -   | -  | -   | -   | -   | 1.6                                       |   |
| Hexachlorobutadiene                                  | µg/m³      | 87-68-3    | ND      | 19     | -   | -  | -   | -   | -   | 0.83 UJ                                   |   |

Table 3

**Analytical Results Summary and Commercial Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date | Parameters | Units             | CAS#       | Max     | USEPA <sup>1</sup><br>Subslab VISL<br>Commercial | Accelerated<br>Response<br>Action Level<br>Commercial (8<br>hours) | Urgent<br>Response<br>Action Level<br>Commercial (8<br>hours) | Chronic<br>Response<br>Action Level<br>Commercial | Ohio EPA <sup>2</sup><br>Management Level | GP34-18<br>SVA-38443-082218-GL-022<br>8/22/2018 |
|---|------------|-------------------|------------|---------|--|--|---|---|---|---|
|   |            |                   |            |         | a  | b  | c   | d   | e   |   |
| Hexane                                      |            | µg/m <sup>3</sup> | 110-54-3   | 630000  | 10200  | -  | -   | -   | -   | 0.93 J  |
| Isopropyl alcohol                           |            | µg/m <sup>3</sup> | 67-63-0    | 160     | 2920   | -  | -   | -   | -   | 43  |
| Isopropyl benzene                           |            | µg/m <sup>3</sup> | 98-82-8    | 9800 J  | 5840   | -  | -   | -   | -   | 1.2 J   |
| m&p-Xylenes                                 |            | µg/m <sup>3</sup> | M/P-XYLENE | 590000  | -  | -  | -   | -   | -   | 6.7   |
| Methyl methacrylate                         |            | µg/m <sup>3</sup> | 80-62-6    | 1.4 J   | 10200  | -  | -   | -   | -   | 0.32 U  |
| Methyl tert butyl ether (MTBE)              |            | µg/m <sup>3</sup> | 1634-04-4  | ND      | 1570   | -  | -   | -   | -   | 0.61 U  |
| Methylene chloride                          |            | µg/m <sup>3</sup> | 75-09-2    | 40      | 8760   | -  | -   | -   | -   | 1.2 J   |
| Naphthalene                                 |            | µg/m <sup>3</sup> | 91-20-3    | 1.5 J   | 12   | -  | -   | 120   | 1200                                      | 0.47 UJ   |
| N-Butylbenzene                              |            | µg/m <sup>3</sup> | 104-51-8   | 16 J    | -  | -  | -   | -   | -   | 0.25 U  |
| N-Heptane                                   |            | µg/m <sup>3</sup> | 142-82-5   | 1100000 | 5840   | -  | -   | -   | -   | 1.3 J   |
| N-Propylbenzene                             |            | µg/m <sup>3</sup> | 103-65-1   | 95 J    | 14600  | -  | -   | -   | -   | 0.28 J  |
| o-Xylene                                    |            | µg/m <sup>3</sup> | 95-47-6    | 180000  | 1460   | -  | -   | -   | -   | 2.2   |
| Styrene                                     |            | µg/m <sup>3</sup> | 100-42-5   | 3.5     | 14600  | -  | -   | -   | -   | 0.53 J  |
| tert-Butyl alcohol                          |            | µg/m <sup>3</sup> | 75-65-0    | 11 J    | -  | -  | -   | -   | -   | 2.2 J   |
| tert-Butylbenzene                           |            | µg/m <sup>3</sup> | 98-06-6    | 5.7 J   | -  | -  | -   | -   | -   | 0.36 U  |
| Tetrachloroethene                           |            | µg/m <sup>3</sup> | 127-18-4   | 550     | 584  | -  | -   | 5800  | 18000                                     | 66  |
| Tetrahydrofuran                             |            | µg/m <sup>3</sup> | 109-99-9   | 4.7 J   | 29200  | -  | -   | -   | -   | 1.7 J   |
| Toluene                                     |            | µg/m <sup>3</sup> | 108-88-3   | 1700000 | 73000  | -  | -   | -   | -   | 4.5   |
| trans-1,2-Dichloroethene                    |            | µg/m <sup>3</sup> | 156-60-5   | 330     | -  | -  | -   | -   | -   | 1.3   |
| trans-1,3-Dichloropropene                   |            | µg/m <sup>3</sup> | 10061-02-6 | ND      | -  | -  | -   | -   | -   | 0.22 U  |
| Trichloroethene                             |            | µg/m <sup>3</sup> | 79-01-6    | 27000   | 29   | 290  | 880   | -   | -   | 0.19 U  |
| Trichlorofluoromethane (CFC-11)             |            | µg/m <sup>3</sup> | 75-69-4    | 8.7     | -  | -  | -   | -   | -   | 4.8   |
| Trifluorotrichloroethane (CFC-113)          |            | µg/m <sup>3</sup> | 76-13-1    | 6.6     | 73000  | -  | -   | -   | -   | 0.93 J  |
| Vinyl bromide (Bromoethene)                 |            | µg/m <sup>3</sup> | 593-60-2   | ND      | 13   | -  | -   | -   | -   | 0.15 U  |
| Vinyl chloride                              |            | µg/m <sup>3</sup> | 75-01-4    | 2500    | 93   | -  | -   | 930   | 9300                                      | 0.21 J  |
| Xylenes (total)                             |            | µg/m <sup>3</sup> | 1330-20-7  | 770000  | 1460   | -  | -   | -   | -   | 8.9   |
| Total VOCs                                  |            | µg/m <sup>3</sup> | -          | -       | -  | -  | -   | -   | -   | 233.08  |

## Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UJ - Not detected; associated reporting limit is estimated.

1 - USEPA sub slab or exterior soil gas concentration Vapor Intrusion Screening Levels (VISLs) based on cancer risk 1E 06 and hazard quotient (HQ)=0.1

2 - Ohio EPA accelerated and urgent response action levels and chronic response action level and removal management levels, from the Ohio EPA Guidance Document titled "Recommendations Regarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio", dated August 2016.

Table 4

**Analytical Results Summary and Residential Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayon Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location                                      | GP01-18<br>SVA-38443-082418-GL-036<br>8/24/2018  | GP01-18<br>SVA-38443-082418-GL-037<br>8/24/2018                    | GP02-09<br>SVA-38443-081518-GL-011<br>8/15/2018 | GP03-09<br>SVA-38443-081418-GL-004<br>8/14/2018 | GP04-09<br>SVA-38443-081418-GL-002<br>8/14/2018 | GP05-09<br>SVA-38443-081418-GL-003<br>8/14/2018 |                     |                     |        |         |                 |                  |        |
|--|--|--|---|---|---|---|---------------------|---------------------|--------|---------|-----------------|------------------|--------|
| Sample ID  |  |  |   | Duplicate                                       |   |   |                     |                     |        |         |                 |                  |        |
| Sample Date  |  |  |   |   |   |   |                     |                     |        |         |                 |                  |        |
| Parameters   | USEPA <sup>1</sup><br>Substab VSL<br>Residential | Ohio EPA <sup>2</sup><br>Action Level<br>Residential<br>(24 hours) | Removal<br>Management Level<br>Residential      |   |   |   |                     |                     |        |         |                 |                  |        |
|  | Units  | CAS#   | Max   | a   | b   | c   |                     |                     |        |         |                 |                  |        |
|  |  |  |   | d   | e   |   |                     |                     |        |         |                 |                  |        |
| <b>Volatiles</b>                                     |  |  |   |   |   |   |                     |                     |        |         |                 |                  |        |
| 1,1,1-Trichloroethane                                | µg/m³  | 71-55-6  | 33  | 17400   | -   | -   | 32 U                | 34 U                | 2.2 U  | 33      | 2.1 J           | 2.4              |        |
| 1,1,2,2-Tetrachloroethane                            | µg/m³  | 79-34-5  | ND  | 2   | -   | -   | 83 U                | 87 U                | 5.7 U  | 0.42 U  | 4.2 U           | 0.42 U           |        |
| 1,1,2-Trichloroethane                                | µg/m³  | 79-00-5  | ND  | 1   | -   | -   | 58 U                | 61 U                | 4.0 U  | 0.29 U  | 2.9 U           | 0.29 U           |        |
| 1,1-Dichloroethane                                   | µg/m³  | 75-34-3  | 3200  | 59  | -   | -   | 21 U                | 22 U                | 1.6 J  | 4.7     | 29              | 0.11 U           |        |
| 1,1-Dichloroethene                                   | µg/m³  | 75-35-4  | 24  | 695   | -   | -   | 27 U                | 28 U                | 1.8 U  | 0.13 U  | 1.3 U           | 0.13 U           |        |
| 1,2,4-Trichlorobenzene                               | µg/m³  | 120-82-1   | ND  | 7   | -   | -   | 140 U               | 150 U               | 9.9 UJ | 0.73 UJ | 7.3 UJ          | 0.73 UJ          |        |
| 1,2,4-Trimethylbenzene                               | µg/m³  | 95-63-6  | 8400 J  | 209   | -   | -   | 61 U                | 64 U                | 15     | 17      | 19              | 16               |        |
| 1,2-Dibromoethane (Ethylene dibromide)               | µg/m³  | 106-93-4   | ND  | 0   | -   | -   | 67 U                | 70 U                | 4.6 U  | 0.34 U  | 3.4 U           | 0.34 U           |        |
| 1,2-Dichlorobenzene                                  | µg/m³  | 95-50-1  | ND  | 695   | -   | -   | 83 U                | 87 U                | 5.7 U  | 0.42 U  | 4.2 U           | 0.42 U           |        |
| 1,2-Dichloroethane                                   | µg/m³  | 107-06-2   | 1   | 4   | -   | -   | 38 U                | 39 U                | 2.6 U  | 0.19 U  | 1.9 U           | 0.19 U           |        |
| 1,2-Dichloropropane                                  | µg/m³  | 78-87-5  | ND  | 14  | -   | -   | 48 U                | 50 U                | 3.3 U  | 0.24 U  | 2.4 U           | 0.24 U           |        |
| 1,2-Dichlortetrafluoroethane (CFC 114)               | µg/m³  | 76-14-2  | 310   | -   | -   | -   | 110 J               | 120 J               | 310    | 0.22 U  | 2.2 U           | 0.22 J           |        |
| 1,3,5-Trimethylbenzene                               | µg/m³  | 108-67-8   | 52 J  | 209   | -   | -   | 63 U                | 66 U                | 4.3 U  | 4.8     | 5.7 J           | 4.4              |        |
| 1,3-Butadiene  | µg/m³  | 106-99-0   | ND  | 3   | -   | -   | 28 U                | 29 U                | 1.9 U  | 0.14 U  | 1.4 U           | 0.14 U           |        |
| 1,3-Dichlorobenzene                                  | µg/m³  | 541-73-1   | 6.9   | -   | -   | -   | 77 U                | 81 U                | 5.3 U  | 0.39 U  | 3.9 U           | 0.39 U           |        |
| 1,3-Dichloropropene                                  | µg/m³  | 542-75-6   | ND  | 23  | -   | -   | ND                  | ND                  | ND     | ND      | ND              | ND               |        |
| 1,4-Dichlorobenzene                                  | µg/m³  | 106-46-7   | 74 J  | 9   | -   | -   | 76 U                | 80 U                | 5.2 U  | 0.38 U  | 3.8 U           | 0.38 U           |        |
| 1,4-Dioxane  | µg/m³  | 123-91-1   | 0.73 J  | 19  | -   | -   | 57 U                | 60 U                | 3.9 U  | 0.29 U  | 2.9 U           | 0.29 U           |        |
| 2,2,4-Trimethylpentane                               | µg/m³  | 540-84-1   | 1800000   | -   | -   | -   | 3500                | 3600                | 2.5 U  | 0.18 U  | 26              | 0.18 U           |        |
| 2-Butanone (Methyl ethyl ketone) (MEK)               | µg/m³  | 78-93-3  | 35 J  | 17400   | -   | -   | 120 U               | 120 U               | 8.0 U  | 9.8     | 24 J            | 10               |        |
| 2-Chlorotoluene                                      | µg/m³  | 95-49-8  | 1.5 J   | -   | -   | -   | 65 U                | 67 U                | 4.4 U  | 0.33 U  | 3.3 U           | 0.33 U           |        |
| 2-Hexanone   | µg/m³  | 591-78-6   | 8.9 J   | 104   | -   | -   | 47 U                | 49 U                | 8.9 J  | 1.9 J   | 2.4 U           | 1.5 J            |        |
| 2-Phenylbutane (sec-Butylbenzene)                    | µg/m³  | 135-98-8   | 47 J  | -   | -   | -   | 70 U                | 73 U                | 4.8 U  | 0.35 U  | 3.5 U           | 0.35 U           |        |
| 4-Ethyl toluene                                      | µg/m³  | 622-96-8   | 72 J  | -   | -   | -   | 64 U                | 67 U                | 4.5 J  | 5.7     | 6.5 J           | 5.3              |        |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/m³  | 108-10-1   | 4.3   | 10400   | -   | -   | 160 U               | 170 U               | 11 U   | 0.86 J  | 8.0 U           | 1.4 J            |        |
| Acetone  | µg/m³  | 67-64-1  | 460   | 107000  | -   | -   | 660 U               | 690 U               | 58 J   | 100     | 460             | 78               |        |
| Allyl chloride                                       | µg/m³  | 107-05-1   | ND  | 3   | -   | -   | 30 U                | 31 U                | 2.0 U  | 0.15 U  | 1.5 U           | 0.15 U           |        |
| Benzene  | µg/m³  | 71-43-2  | 110000  | 12  | -   | -   | 2200 <sup>a</sup>   | 2100 <sup>a</sup>   | 9.6    | 0.57 J  | 3.0 J           | 0.41 J           |        |
| Benzyl chloride                                      | µg/m³  | 100-44-7   | ND  | 2   | -   | -   | 80 U                | 84 U                | 5.5 U  | 0.40 U  | 4.0 U           | 0.40 U           |        |
| Bromodichloromethane                                 | µg/m³  | 75-27-4  | ND  | 3   | -   | -   | 58 U                | 61 U                | 4.0 U  | 0.29 U  | 2.9 U           | 0.29 U           |        |
| Bromoform  | µg/m³  | 75-25-2  | ND  | 85  | -   | -   | 98 U                | 100 U               | 6.7 U  | 0.50 U  | 5.0 U           | 0.50 U           |        |
| Bromomethane (Methyl bromide)                        | µg/m³  | 74-83-9  | 0.98 J  | 17  | -   | -   | 25 U                | 26 U                | 1.7 U  | 0.35 J  | 1.2 U           | 0.19 J           |        |
| Butane   | µg/m³  | 106-97-8   | 8100  | -   | -   | -   | 4000                | 3800                | 740    | 0.81 J  | 610             | 0.74 J           |        |
| Carbon disulfide                                     | µg/m³  | 75-15-0  | 270 J   | 2430  | -   | -   | 58 J                | 54 J                | 15 J   | 26      | 66              | 15               |        |
| Carbon tetrachloride                                 | µg/m³  | 56-23-5  | 36  | 16  | -   | 160   | 1600                | 47 U                | 49 U   | 3.3 U   | 0.24 U          | 2.4 U            | 0.24 U |
| Chlorobenzene  | µg/m³  | 108-90-7   | 110000  | 174   | -   | -   | 110000 <sup>a</sup> | 110000 <sup>a</sup> | 3.1 U  | 0.23 U  | 2.3 U           | 0.23 U           |        |
| Chlorodifluoromethane                                | µg/m³  | 75-45-6  | 580   | 174000  | -   | -   | 580                 | 540                 | 470    | 0.52 J  | 32              | 1.1              |        |
| Chloroethane   | µg/m³  | 75-00-3  | 550   | 34800   | -   | -   | 95 J                | 73 J                | 4.6 J  | 0.53    | 3.1 J           | 0.27 J           |        |
| Chloroform (Trichloromethane)                        | µg/m³  | 67-66-3  | 110 J   | 4   | -   | 41  | 410                 | 37 U                | 38 U   | 2.5 U   | 18 <sup>a</sup> | 1.9 U            | 0.19 U |
| Chloromethane (Methyl chloride)                      | µg/m³  | 74-87-3  | 3.5   | 313   | -   | -   | 65 U                | 68 U                | 4.5 U  | 1.2     | 3.3 U           | 0.45 J           |        |
| cis-1,2-Dichloroethene                               | µg/m³  | 156-59-2   | 1700  | -   | -   | -   | 130 J               | 140 J               | 10 J   | 0.93    | 2.4 U           | 0.24 U           |        |
| cis-1,3-Dichloropropene                              | µg/m³  | 10061-01-5   | ND  | -   | -   | -   | 67 U                | 69 U                | 4.6 U  | 0.34 U  | 3.4 U           | 0.34 U           |        |
| Cyclohexane  | µg/m³  | 110-82-7   | 230000  | 20900   | -   | -   | 1800                | 1900                | 310    | 0.68 J  | 8.2 J           | 0.41 J           |        |
| Cymene (p-Isopropyltoluene)                          | µg/m³  | 99-87-6  | 0.46 J  | -   | -   | -   | 62 U                | 65 U                | 4.3 U  | 0.46 J  | 3.1 U           | 0.44 J           |        |
| Dibromochloromethane                                 | µg/m³  | 124-48-1   | ND  | -   | -   | -   | 71 U                | 74 U                | 4.9 U  | 0.36 U  | 3.6 U           | 0.36 U           |        |
| Dichlorodifluoromethane (CFC-12)                     | µg/m³  | 75-71-8  | 570   | 348   | -   | -   | 67 U                | 70 U                | 330    | 1.1     | 9.8             | 570 <sup>a</sup> |        |
| Ethylbenzene   | µg/m³  | 100-41-4   | 140000  | 37  | -   | -   | 500 <sup>a</sup>    | 500 <sup>a</sup>    | 4.2 J  | 3.2     | 24              | 2.9              |        |
| Hexachlorobutadiene                                  | µg/m³  | 87-68-3  | ND  | 4   | -   | -   | 160 U               | 170 U               | 11 UJ  | 0.83 UJ | 8.3 UJ          | 0.83 UJ          |        |
| Hexane   | µg/m³  | 110-54-3   | 630000  | 2430  | -   | -   | 1300                | 1200                | 220    | 0.92 J  | 22              | 0.94 J           |        |

Table 4

**Analytical Results Summary and Residential Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date | Parameters        | Units      | CAS#    | Max   | USEPA <sup>1</sup>          |  | Ohio EPA <sup>2</sup>   |  |  | GP01-18<br>SVA-38443-082418-GL-036<br>8/24/2018 | GP01-18<br>SVA-38443-082418-GL-037<br>8/24/2018 | GP02-09<br>SVA-38443-081518-GL-011<br>8/15/2018 | GP03-09<br>SVA-38443-081418-GL-004<br>8/14/2018 | GP04-09<br>SVA-38443-081418-GL-002<br>8/14/2018 | GP05-09<br>SVA-38443-081418-GL-003<br>8/14/2018 |
|---|-------------------|------------|---------|-------|-----------------------------|--|---|--|--|---|---|---|---|---|---|
|   |                   |            |         |       | Subslab VISL<br>Residential | Accelerated<br>Response<br>Action Level<br>Residential<br>(24 hours) | Urgent<br>Response<br>Action Level<br>Residential<br>(24 hours) | Chronic<br>Response<br>Action Level<br>Residential | Removal<br>Management Level<br>Residential |   |   |   |   |   |   |
|   |                   |            |         |       | a                           | b  | c   | d  | e  |   |   |   |   |   |   |
| Isopropyl alcohol                           | µg/m <sup>3</sup> | 67-63-0    | 160     | 695   | -                           | -  | -   | -  | 46 U                                       | 48 U  | 14 J  | 2.3 J   | 8.1 J   | 4.6 J   |   |
| Isopropyl benzene                           | µg/m <sup>3</sup> | 98-82-8    | 9800 J  | 1390  | -                           | -  | -   | -  | 58 U                                       | 61 U  | 4.0 U   | 0.29 U  | 2.9 U   | 0.29 U  |   |
| m&p-Xylenes                                 | µg/m <sup>3</sup> | M/P-XYLENE | 590000  | -     | -                           | -  | -   | -  | 290  | 290   | 16  | 15  | 84  | 13  |   |
| Methyl methacrylate                         | µg/m <sup>3</sup> | 80-62-6    | 1.4 J   | 2430  | -                           | -  | -   | -  | 64 U                                       | 67 U  | 4.4 U   | 0.32 U  | 3.2 U   | 0.32 U  |   |
| Methyl tert butyl ether (MTBE)              | µg/m <sup>3</sup> | 1634-04-4  | ND      | 360   | -                           | -  | -   | -  | 120 U                                      | 130 U   | 8.3 U   | 0.61 U  | 6.1 U   | 0.61 U  |   |
| Methylene chloride                          | µg/m <sup>3</sup> | 75-09-2    | 40      | 2090  | -                           | -  | -   | -  | 220 U                                      | 230 U   | 15 U  | 1.2 J   | 11 U  | 1.1 J   |   |
| Naphthalene                                 | µg/m <sup>3</sup> | 91-20-3    | 1.5 J   | 3     | -                           | -  | 28  | 280  | 93 U                                       | 98 U  | 6.4 UJ  | 1.1 J   | 4.7 UJ  | 1.1 J   |   |
| N-Butylbenzene                              | µg/m <sup>3</sup> | 104-51-8   | 16 J    | -     | -                           | -  | -   | -  | 50 U                                       | 52 U  | 3.8 J   | 3.5   | 2.8 J   | 3.3   |   |
| N-Heptane                                   | µg/m <sup>3</sup> | 142-82-5   | 1100000 | 1390  | -                           | -  | -   | -  | 1600 <sup>a</sup>                          | 1600 <sup>a</sup>                               | 130   | 0.57 J  | 5.0 J   | 0.54 J  |   |
| N-Propylbenzene                             | µg/m <sup>3</sup> | 103-65-1   | 95 J    | 3480  | -                           | -  | -   | -  | 55 U                                       | 57 U  | 3.7 U   | 3.0   | 5.0 J   | 2.7   |   |
| o-Xylene                                    | µg/m <sup>3</sup> | 95-47-6    | 180000  | 348   | -                           | -  | -   | -  | 52 U                                       | 55 U  | 6.8 J   | 6.0   | 28  | 5.4   |   |
| Styrene                                     | µg/m <sup>3</sup> | 100-42-5   | 3.5     | 3480  | -                           | -  | -   | -  | 49 U                                       | 51 U  | 3.4 U   | 3.5   | 2.5 U   | 3.2   |   |
| tert-Butyl alcohol                          | µg/m <sup>3</sup> | 75-65-0    | 11 J    | -     | -                           | -  | -   | -  | 23 U                                       | 24 U  | 6.2 J   | 2.3 J   | 8.0 J   | 7.4   |   |
| tert-Butylbenzene                           | µg/m <sup>3</sup> | 98-06-6    | 5.7 J   | -     | -                           | -  | -   | -  | 72 U                                       | 75 U  | 5.7 J   | 0.36 U  | 3.6 U   | 0.36 U  |   |
| Tetrachloroethene                           | µg/m <sup>3</sup> | 127-18-4   | 550     | 139   | -                           | -  | 1400  | 4200   | 54 U                                       | 56 U  | 3.7 U   | 550 <sup>a</sup>                                | 2.7 U   | 7.0   |   |
| Tetrahydrofuran                             | µg/m <sup>3</sup> | 109-99-9   | 4.7 J   | 6950  | -                           | -  | -   | -  | 37 U                                       | 38 U  | 2.5 U   | 1.3 J   | 1.9 U   | 1.2 J   |   |
| Toluene                                     | µg/m <sup>3</sup> | 108-88-3   | 1700000 | 17400 | -                           | -  | -   | -  | 160  | 170   | 12  | 15  | 65  | 13  |   |
| trans-1,2-Dichloroethene                    | µg/m <sup>3</sup> | 156-60-5   | 330     | -     | -                           | -  | -   | -  | 39 U                                       | 41 U  | 2.7 U   | 0.20 U  | 2.0 U   | 0.20 U  |   |
| trans-1,3-Dichloropropene                   | µg/m <sup>3</sup> | 10061-02-6 | ND      | -     | -                           | -  | -   | -  | 43 U                                       | 45 U  | 3.0 U   | 0.22 U  | 2.2 U   | 0.22 U  |   |
| Trichloroethene                             | µg/m <sup>3</sup> | 79-01-6    | 27000   | 7     | 70                          | 210  | -   | -  | 38 U                                       | 40 U  | 2.6 U   | 120 <sup>ab</sup>                               | 1.9 U   | 0.19 U  |   |
| Trichlorofluoromethane (CFC-11)             | µg/m <sup>3</sup> | 75-69-4    | 8.7     | -     | -                           | -  | -   | -  | 27 U                                       | 28 U  | 1.8 U   | 2.6   | 1.3 U   | 4.6   |   |
| Trifluorotrichloroethane (CFC-113)          | µg/m <sup>3</sup> | 76-13-1    | 6.6     | 17400 | -                           | -  | -   | -  | 47 U                                       | 49 U  | 3.2 U   | 0.72 J  | 2.4 U   | 0.60 J  |   |
| Vinyl bromide (Bromoethene)                 | µg/m <sup>3</sup> | 593-60-2   | ND      | 3     | -                           | -  | -   | -  | 30 U                                       | 32 U  | 2.1 U   | 0.15 U  | 1.5 U   | 0.15 U  |   |
| Vinyl chloride                              | µg/m <sup>3</sup> | 75-01-4    | 2500    | 6     | -                           | -  | 56  | 560  | 1000 <sup>ade</sup>                        | 960 <sup>ade</sup>                              | 65 <sup>ad</sup>                                | 0.18 U  | 1.8 U   | 0.18 U  |   |
| Xylenes (total)                             | µg/m <sup>3</sup> | 1330-20-7  | 770000  | 348   | -                           | -  | -   | -  | 290  | 290   | 22.8  | 21  | 112   | 18.4  |   |
| Total VOCs                                  | µg/m <sup>3</sup> | -          | -       | -     | -                           | -  | -   | -  | 127613                                     | 127337  | 2793.7  | 982.12  | 1668.3  | 799.21  |   |

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UU - Not detected; associated reporting limit is estimated.

1 - USEPA sub slab or exterior soil gas concentration Vapor Intrusion Screening Levels (VISLs) based on cancer risk 1E 06 and hazard quotient (HQ)=0.1

2 - Ohio EPA accelerated and urgent response action levels and chronic response action level and removal management levels, from the Ohio EPA Guidance Document titled "Recommendations Regarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio", dated August 2016.

Table 4

**Analytical Results Summary and Residential Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayon Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date          | Parameters        | Units      | CAS#    | Max    | USEPA <sup>1</sup>     |                     | Ohio EPA <sup>2</sup>  |   |  | GP06-09<br>SVA-38443-082118-GL-019<br>8/21/2018 | GP07-18<br>SVA-38443-082118-GL-018<br>8/21/2018 | GP09-09<br>SVA-38443-082118-GL-021<br>8/21/2018 | GP10-09<br>SVA-38443-082118-GL-020<br>8/21/2018 | GP11-09<br>SVA-38443-081518-GL-012<br>8/15/2018 | GP12-09<br>SVA-38443-082018-GL-013<br>8/20/2018 |
|--|-------------------|------------|---------|--------|------------------------|---------------------|--|---|--|---|---|---|---|---|---|
|  |                   |            |         |        | Substab<br>Residential | VISL<br>Residential | Accelerated<br>Response<br>Action Level<br>Residential<br>(24 hours) | Urgent<br>Response<br>Action Level<br>Residential<br>(24 hours) | Chronic<br>Response<br>Action Level<br>Residential | Removal<br>Management Level<br>Residential      |   |   |   |   |   |
| a  | b                 | c          | d       | e      |                        |                     |  |   |  |   |   |   |   |   |   |
| <b>Volatiles</b>                                     |                   |            |         |        |                        |                     |  |   |  |   |   |   |   |   |   |
| 1,1,1-Trichloroethane                                | µg/m <sup>3</sup> | 71-55-6    | 33      | 17400  | -                      | -                   | -  | -   | 0.49 J   | 3700 U  | 4.1 J   | 4.5   | 2.6   | 1.6 U   |   |
| 1,1,2,2-Tetrachloroethane                            | µg/m <sup>3</sup> | 79-34-5    | ND      | 2      | -                      | -                   | -  | -   | 0.42 U   | 9500 U  | 4.2 U   | 1.0 U   | 0.42 U  | 4.2 U   |   |
| 1,1,2-Trichloroethane                                | µg/m <sup>3</sup> | 79-00-5    | ND      | 1      | -                      | -                   | -  | -   | 0.29 U   | 6700 U  | 2.9 U   | 0.74 U  | 0.29 U  | 2.9 U   |   |
| 1,1-Dichloroethane                                   | µg/m <sup>3</sup> | 75-34-3    | 3200    | 59     | -                      | -                   | -  | -   | 0.11 U   | 2400 U  | 1.1 U   | 2.9   | 0.11 U  | 1.1 U   |   |
| 1,1-Dichloroethene                                   | µg/m <sup>3</sup> | 75-35-4    | 24      | 695    | -                      | -                   | -  | -   | 0.13 U   | 3000 U  | 1.3 U   | 0.34 U  | 0.13 U  | 1.3 U   |   |
| 1,2,4-Trichlorobenzene                               | µg/m <sup>3</sup> | 120-82-1   | ND      | 7      | -                      | -                   | -  | -   | 0.73 UJ  | 16000 UJ  | 7.3 UJ  | 1.8 UJ  | 0.73 UJ   | 7.3 UJ  |   |
| 1,2,4-Trimethylbenzene                               | µg/m <sup>3</sup> | 95-63-6    | 8400 J  | 209    | -                      | -                   | -  | -   | 8.9  | 8400 J <sup>a</sup>                             | 12  | 11  | 13  | 7.8 J   |   |
| 1,2-Dibromoethane (Ethylene dibromide)               | µg/m <sup>3</sup> | 106-93-4   | ND      | 0      | -                      | -                   | -  | -   | 0.34 U   | 7600 U  | 3.4 U   | 0.85 U  | 0.34 U  | 3.4 U   |   |
| 1,2-Dichlorobenzene                                  | µg/m <sup>3</sup> | 95-50-1    | ND      | 695    | -                      | -                   | -  | -   | 0.42 U   | 9500 U  | 4.2 U   | 1.1 U   | 0.42 U  | 4.2 U   |   |
| 1,2-Dichloroethane                                   | µg/m <sup>3</sup> | 107-06-2   | 1       | 4      | -                      | -                   | -  | -   | 0.89   | 4300 U  | 1.9 U   | 0.48 U  | 0.19 U  | 1.9 U   |   |
| 1,2-Dichloropropane                                  | µg/m <sup>3</sup> | 78-87-5    | ND      | 14     | -                      | -                   | -  | -   | 0.24 U   | 5400 U  | 2.4 U   | 0.60 U  | 0.24 U  | 2.4 U   |   |
| 1,2-Dichlortetrafluoroethane (CFC 114)               | µg/m <sup>3</sup> | 76-14-2    | 310     | -      | -                      | -                   | -  | -   | 0.22 U   | 5100 U  | 2.2 U   | 0.99 J  | 0.22 U  | 2.2 U   |   |
| 1,3,5-Trimethylbenzene                               | µg/m <sup>3</sup> | 108-67-8   | 52 J    | 209    | -                      | -                   | -  | -   | 2.5  | 7200 U  | 4.5 J   | 2.9   | 3.7   | 3.2 U   |   |
| 1,3-Butadiene  | µg/m <sup>3</sup> | 106-99-0   | ND      | 3      | -                      | -                   | -  | -   | 0.14 U   | 3200 U  | 1.4 U   | 0.35 U  | 0.14 U  | 1.4 U   |   |
| 1,3-Dichlorobenzene                                  | µg/m <sup>3</sup> | 541-73-1   | 6.9     | -      | -                      | -                   | -  | -   | 0.63 J   | 8800 U  | 3.9 U   | 4.2   | 0.39 U  | 3.9 U   |   |
| 1,3-Dichloropropene                                  | µg/m <sup>3</sup> | 542-75-6   | ND      | 23     | -                      | -                   | -  | -   | ND   | ND  | ND  | ND  | ND  | ND  |   |
| 1,4-Dichlorobenzene                                  | µg/m <sup>3</sup> | 106-46-7   | 74 J    | 9      | -                      | -                   | -  | -   | 0.38 U   | 8700 U  | 3.8 U   | 0.96 U  | 0.38 U  | 3.8 U   |   |
| 1,4-Dioxane  | µg/m <sup>3</sup> | 123-91-1   | 0.73 J  | 19     | -                      | -                   | -  | -   | 0.29 U   | 6500 U  | 2.9 U   | 0.72 U  | 0.29 U  | 2.9 U   |   |
| 2,2,4-Trimethylpentane                               | µg/m <sup>3</sup> | 540-84-1   | 1800000 | -      | -                      | -                   | -  | -   | 17   | 1800000   | 20 J  | 2.1 J   | 0.18 U  | 1.8 U   |   |
| 2-Butanone (Methyl ethyl ketone) (MEK)               | µg/m <sup>3</sup> | 78-93-3    | 35 J    | 17400  | -                      | -                   | -  | -   | 11   | 13000 U   | 13 J  | 12  | 4.7   | 7.8 J   |   |
| 2-Chlorotoluene                                      | µg/m <sup>3</sup> | 95-49-8    | 1.5 J   | -      | -                      | -                   | -  | -   | 0.33 U   | 7400 U  | 3.3 U   | 1.5 J   | 0.33 U  | 3.3 U   |   |
| 2-Hexanone   | µg/m <sup>3</sup> | 591-78-6   | 8.9 J   | 104    | -                      | -                   | -  | -   | 2.1  | 5400 U  | 2.4 U   | 1.7 J   | 0.61 J  | 4.1 J   |   |
| 2-Phenylbutane (sec-Butylbenzene)                    | µg/m <sup>3</sup> | 135-98-8   | 47 J    | -      | -                      | -                   | -  | -   | 0.35 U   | 7900 U  | 3.5 U   | 0.88 U  | 0.35 U  | 3.5 U   |   |
| 4-Ethyl tolune                                       | µg/m <sup>3</sup> | 622-96-8   | 72 J    | -      | -                      | -                   | -  | -   | 2.1  | 7300 U  | 4.0 J   | 2.6 J   | 3.4   | 3.2 U   |   |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/m <sup>3</sup> | 108-10-1   | 4.3     | 10400  | -                      | -                   | -  | -   | 1.8 J  | 18000 U   | 8.0 U   | 2.0 U   | 2.7   | 8.0 U   |   |
| Acetone  | µg/m <sup>3</sup> | 67-64-1    | 460     | 107000 | -                      | -                   | -  | -   | 69 J   | 75000 UJ  | 95 J  | 96  | 41  | 130   |   |
| Allyl chloride                                       | µg/m <sup>3</sup> | 107-05-1   | ND      | 3      | -                      | -                   | -  | -   | 0.15 U   | 3400 U  | 1.5 U   | 0.38 U  | 0.15 U  | 1.5 U   |   |
| Benzene  | µg/m <sup>3</sup> | 71-43-2    | 110000  | 12     | -                      | -                   | -  | -   | 1.8  | 110000 <sup>a</sup>                             | 2.5 J   | 1.7   | 0.39 J  | 1.8 U   |   |
| Benzyl chloride                                      | µg/m <sup>3</sup> | 100-44-7   | ND      | 2      | -                      | -                   | -  | -   | 0.40 U   | 9100 U  | 4.0 U   | 1.0 U   | 0.40 U  | 4.0 U   |   |
| Bromodichloromethane                                 | µg/m <sup>3</sup> | 75-27-4    | ND      | 3      | -                      | -                   | -  | -   | 0.29 U   | 6700 U  | 2.9 U   | 0.74 U  | 0.29 U  | 2.9 U   |   |
| Bromoform  | µg/m <sup>3</sup> | 75-25-2    | ND      | 85     | -                      | -                   | -  | -   | 0.50 U   | 11000 U   | 5.0 U   | 1.2 U   | 0.50 U  | 5.0 U   |   |
| Bromomethane (Methyl bromide)                        | µg/m <sup>3</sup> | 74-83-9    | 0.98 J  | 17     | -                      | -                   | -  | -   | 0.14 J   | 2800 U  | 1.2 U   | 0.31 U  | 0.20 J  | 1.2 U   |   |
| Butane   | µg/m <sup>3</sup> | 106-97-8   | 8100    | -      | -                      | -                   | -  | -   | 0.72 J   | 6200 J  | 1.8 J   | 3.1   | 1.2   | 1.7 U   |   |
| Carbon disulfide                                     | µg/m <sup>3</sup> | 75-15-0    | 270 J   | 2430   | -                      | -                   | -  | -   | 13   | 2200 U  | 34  | 4.7   | 36  | 31  |   |
| Carbon tetrachloride                                 | µg/m <sup>3</sup> | 56-23-5    | 36      | 16     | -                      | -                   | 160  | 1600  | 0.24 U   | 5400 U  | 2.4 U   | 0.60 U  | 0.24 U  | 2.4 U   |   |
| Chlorobenzene  | µg/m <sup>3</sup> | 108-90-7   | 110000  | 174    | -                      | -                   | -  | -   | 0.23 U   | 5100 U  | 2.3 U   | 0.56 U  | 0.23 U  | 2.3 U   |   |
| Chlorodifluoromethane                                | µg/m <sup>3</sup> | 75-45-6    | 580     | 174000 | -                      | -                   | -  | -   | 5.6  | 3000 U  | 4.1 J   | 5.3   | 2.0   | 6.0 J   |   |
| Chloroethane   | µg/m <sup>3</sup> | 75-00-3    | 550     | 34800  | -                      | -                   | -  | -   | 0.092 U  | 2100 U  | 0.92 U  | 0.23 U  | 0.46 J  | 0.96 J  |   |
| Chloroform (Trichloromethane)                        | µg/m <sup>3</sup> | 67-66-3    | 110 J   | 4      | -                      | -                   | 41   | 410   | 0.38 J   | 4200 U  | 1.9 U   | 0.46 U  | 0.19 U  | 1.9 U   |   |
| Chloromethane (Methyl chloride)                      | µg/m <sup>3</sup> | 74-87-3    | 3.5     | 313    | -                      | -                   | -  | -   | 0.55 J   | 7500 U  | 3.3 U   | 0.83 U  | 3.4   | 3.3 J   |   |
| cis-1,2-Dichloroethene                               | µg/m <sup>3</sup> | 156-59-2   | 1700    | -      | -                      | -                   | -  | -   | 0.24 U   | 5400 U  | 2.4 U   | 3.2   | 0.24 U  | 2.4 U   |   |
| cis-1,3-Dichloropropene                              | µg/m <sup>3</sup> | 10061-01-5 | ND      | -      | -                      | -                   | -  | -   | 0.34 U   | 7600 U  | 3.4 U   | 0.84 U  | 0.34 U  | 3.4 U   |   |
| Cyclohexane  | µg/m <sup>3</sup> | 110-82-7   | 230000  | 20900  | -                      | -                   | -  | -   | 2.5  | 230000 <sup>a</sup>                             | 2.5 J   | 1.1 J   | 0.67 J  | 1.4 U   |   |
| Cymene (p-Isopropyltoluene)                          | µg/m <sup>3</sup> | 99-87-6    | 0.46 J  | -      | -                      | -                   | -  | -   | 0  |   |   |   |   |   |   |

Table 4

**Analytical Results Summary and Residential Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date | Parameters        | Units      | CAS#    | Max   | USEPA <sup>1</sup>     |                     | Ohio EPA <sup>2</sup>  |   |  | GP06-09<br>SVA-38443-082118-GL-019<br>8/21/2018 | GP07-18<br>SVA-38443-082118-GL-018<br>8/21/2018 | GP09-09<br>SVA-38443-082118-GL-021<br>8/21/2018 | GP10-09<br>SVA-38443-082118-GL-020<br>8/21/2018 | GP11-09<br>SVA-38443-081518-GL-012<br>8/15/2018 | GP12-09<br>SVA-38443-082018-GL-013<br>8/20/2018 |
|---|-------------------|------------|---------|-------|------------------------|---------------------|--|---|--|---|---|---|---|---|---|
|   |                   |            |         |       | Subslab<br>Residential | VISL<br>Residential | Accelerated<br>Response<br>Action Level<br>Residential<br>(24 hours) | Urgent<br>Response<br>Action Level<br>Residential<br>(24 hours) | Chronic<br>Response<br>Action Level<br>Residential | Removal<br>Management Level<br>Residential      |   |   |   |   |   |
|   |                   | a          | b       | c     | d                      | e                   |  |   |  |   |   |   |   |   |   |
| Isopropyl alcohol                           | µg/m <sup>3</sup> | 67-63-0    | 160     | 695   | -                      | -                   | -  | -   | 57   | 5200 U  | 140   | 160   | 2.5 J   | 27 J  |   |
| Isopropyl benzene                           | µg/m <sup>3</sup> | 98-82-8    | 9800 J  | 1390  | -                      | -                   | -  | -   | 1.4 J  | 9800 J <sup>a</sup>                             | 4.4 J   | 2.6 J   | 0.68 J  | 2.9 U   |   |
| m&p-Xylenes                                 | µg/m <sup>3</sup> | M/P-XYLENE | 590000  | -     | -                      | -                   | -  | -   | 12   | 590000  | 47  | 13  | 11  | 7.4 J   |   |
| Methyl methacrylate                         | µg/m <sup>3</sup> | 80-62-6    | 1.4 J   | 2430  | -                      | -                   | -  | -   | 0.32 U   | 7300 U  | 3.2 U   | 0.81 U  | 1.4 J   | 3.2 U   |   |
| Methyl tert butyl ether (MTBE)              | µg/m <sup>3</sup> | 1634-04-4  | ND      | 360   | -                      | -                   | -  | -   | 0.61 U   | 14000 U   | 6.1 U   | 1.5 U   | 0.61 U  | 6.1 U   |   |
| Methylene chloride                          | µg/m <sup>3</sup> | 75-09-2    | 40      | 2090  | -                      | -                   | -  | -   | 7.0  | 25000 U   | 14 J  | 3.6 J   | 2.3   | 11 U  |   |
| Naphthalene                                 | µg/m <sup>3</sup> | 91-20-3    | 1.5 J   | 3     | -                      | -                   | 28   | 280   | 0.79 J   | 11000 UJ  | 4.7 UJ  | 1.5 J   | 1.0 J   | 4.7 UJ  |   |
| N-Butylbenzene                              | µg/m <sup>3</sup> | 104-51-8   | 16 J    | -     | -                      | -                   | -  | -   | 1.8 J  | 5700 U  | 2.5 U   | 2.4 J   | 2.7   | 2.5 U   |   |
| N-Heptane                                   | µg/m <sup>3</sup> | 142-82-5   | 1100000 | 1390  | -                      | -                   | -  | -   | 12   | 1100000 <sup>a</sup>                            | 14 J  | 3.4 J   | 0.50 J  | 1.9 U   |   |
| N-Propylbenzene                             | µg/m <sup>3</sup> | 103-65-1   | 95 J    | 3480  | -                      | -                   | -  | -   | 1.2 J  | 6200 U  | 2.8 U   | 1.5 J   | 2.2   | 2.8 U   |   |
| o-Xylene                                    | µg/m <sup>3</sup> | 95-47-6    | 180000  | 348   | -                      | -                   | -  | -   | 4.9  | 180000 <sup>a</sup>                             | 20  | 5.5   | 4.5   | 2.9 J   |   |
| Styrene                                     | µg/m <sup>3</sup> | 100-42-5   | 3.5     | 3480  | -                      | -                   | -  | -   | 1.2  | 5600 U  | 2.5 U   | 1.7 J   | 2.2   | 2.5 U   |   |
| tert-Butyl alcohol                          | µg/m <sup>3</sup> | 75-65-0    | 11 J    | -     | -                      | -                   | -  | -   | 3.3 J  | 2600 U  | 5.1 J   | 8.5 J   | 1.1 J   | 11 J  |   |
| tert-Butylbenzene                           | µg/m <sup>3</sup> | 98-06-6    | 5.7 J   | -     | -                      | -                   | -  | -   | 0.36 U   | 8200 U  | 3.6 U   | 0.91 U  | 0.36 U  | 3.6 U   |   |
| Tetrachloroethene                           | µg/m <sup>3</sup> | 127-18-4   | 550     | 139   | -                      | -                   | 1400   | 4200  | 22   | 6100 U  | 26  | 13  | 1.1 J   | 92  |   |
| Tetrahydrofuran                             | µg/m <sup>3</sup> | 109-99-9   | 4.7 J   | 6950  | -                      | -                   | -  | -   | 0.19 U   | 4200 U  | 4.7 J   | 3.7 J   | 0.88 J  | 1.9 U   |   |
| Toluene                                     | µg/m <sup>3</sup> | 108-88-3   | 1700000 | 17400 | -                      | -                   | -  | -   | 23   | 1700000 <sup>a</sup>                            | 38  | 13  | 9.8   | 4.5 U   |   |
| trans-1,2-Dichloroethene                    | µg/m <sup>3</sup> | 156-60-5   | 330     | -     | -                      | -                   | -  | -   | 0.59 J   | 4500 U  | 2.2 J   | 1.4 J   | 0.20 U  | 2.0 U   |   |
| trans-1,3-Dichloropropene                   | µg/m <sup>3</sup> | 10061-02-6 | ND      | -     | -                      | -                   | -  | -   | 0.22 U   | 4900 U  | 2.2 U   | 0.54 U  | 0.22 U  | 2.2 U   |   |
| Trichloroethene                             | µg/m <sup>3</sup> | 79-01-6    | 27000   | 7     | 70                     | 210                 | -  | -   | 0.28 J   | 4400 U  | 690 <sup>abc</sup>                              | 34 <sup>a</sup>                                 | 0.19 U  | 690 <sup>abc</sup>                              |   |
| Trichlorofluoromethane (CFC-11)             | µg/m <sup>3</sup> | 75-69-4    | 8.7     | -     | -                      | -                   | -  | -   | 8.7  | 3100 U  | 2.9 J   | 0.76 J  | 2.4   | 2.0 J   |   |
| Trifluorotrichloroethane (CFC-113)          | µg/m <sup>3</sup> | 76-13-1    | 6.6     | 17400 | -                      | -                   | -  | -   | 0.60 J   | 5400 U  | 2.4 U   | 1.5 J   | 0.62 J  | 2.4 U   |   |
| Vinyl bromide (Bromoethene)                 | µg/m <sup>3</sup> | 593-60-2   | ND      | 3     | -                      | -                   | -  | -   | 0.15 U   | 3500 U  | 1.5 U   | 0.38 U  | 0.15 U  | 1.5 U   |   |
| Vinyl chloride                              | µg/m <sup>3</sup> | 75-01-4    | 2500    | 6     | -                      | -                   | 56   | 560   | 0.18 U   | 4100 U  | 1.8 U   | 1.7   | 0.61  | 1.8 U   |   |
| Xylenes (total)                             | µg/m <sup>3</sup> | 1330-20-7  | 770000  | 348   | -                      | -                   | -  | -   | 16.9   | 770000 <sup>a</sup>                             | 67  | 18.5  | 15.5  | 10.3  |   |
| Total VOCs                                  | µg/m <sup>3</sup> | -          | -       | -     | -                      | -                   | -  | -   | 335.16   | 7274400   | 1290.9  | 466.85  | 184.11  | 1037.26   |   |

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UU - Not detected; associated reporting limit is estimated.

1 - USEPA sub slab or exterior soil gas concentration Vapor Intrusion Screening Levels (VISLs) based on cancer risk 1E 06 and hazard quotient (HQ)=0.1

2 - Ohio EPA accelerated and urgent response action levels and chronic response action level and removal management levels, from the Ohio EPA Guidance Document titled "Recommendations Regarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio", dated August 2016.

Table 4

**Analytical Results Summary and Residential Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayon Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date          | Parameters | Units      | CAS#    | Max    | USEPA <sup>1</sup>     |                     | Ohio EPA <sup>2</sup>  |   |  | GP13-09<br>SVA-38443-082018-GL-014<br>8/20/2018 | GP14-09<br>SVA-38443-082018-GL-015<br>8/20/2018 | GP14-09<br>SVA-38443-082018-GL-016<br>8/20/2018 | GP15-09<br>SVA-38443-082018-GL-017<br>8/20/2018 | GP16-09<br>SVA-38443-082318-GL-028<br>8/23/2018 | GP19-18<br>SVA-38443-082318-GL-034<br>8/23/2018 |
|--|------------|------------|---------|--------|------------------------|---------------------|--|---|--|---|---|---|---|---|---|
|  |            |            |         |        | Substab<br>Residential | VISL<br>Residential | Accelerated<br>Response<br>Action Level<br>Residential<br>(24 hours) | Urgent<br>Response<br>Action Level<br>Residential<br>(24 hours) | Chronic<br>Response<br>Action Level<br>Residential | Removal<br>Management Level<br>Residential      |   |   |   |   |   |
|  |            |            |         |        | a                      | b                   | c  | d   | e  |   |   |   |   |   |   |
| <b>Volatiles</b>                                     |            |            |         |        |                        |                     |  |   |  |   |   |   |   |   |   |
| 1,1,1-Trichloroethane                                | µg/m³      | 71-55-6    | 33      | 17400  | -                      | -                   | -  | -   | 14   | 1.3 J   | 1.3 J   | 8.5 J   | 17 U  | 4.8 U   |   |
| 1,1,2,2-Tetrachloroethane                            | µg/m³      | 79-34-5    | ND      | 2      | -                      | -                   | -  | -   | 0.42 U   | 1.7 U   | 1.7 U   | 12 U  | 43 U  | 12 U  |   |
| 1,1,2-Trichloroethane                                | µg/m³      | 79-00-5    | ND      | 1      | -                      | -                   | -  | -   | 0.29 U   | 1.2 U   | 1.2 U   | 8.7 U   | 30 U  | 8.7 U   |   |
| 1,1-Dichloroethane                                   | µg/m³      | 75-34-3    | 3200    | 59     | -                      | -                   | -  | -   | 310 <sup>a</sup>                                   | 1.5 J   | 1.7 J   | 3200 <sup>a</sup>                               | 55 J  | 3.1 U   |   |
| 1,1-Dichloroethene                                   | µg/m³      | 75-35-4    | 24      | 695    | -                      | -                   | -  | -   | 0.32 J   | 0.54 U  | 0.54 U  | 6.7 J   | 14 U  | 11 J  |   |
| 1,2,4-Trichlorobenzene                               | µg/m³      | 120-82-1   | ND      | 7      | -                      | -                   | -  | -   | 0.73 UJ  | 2.9 UJ  | 2.9 UJ  | 22 UJ   | 75 UJ   | 22 U  |   |
| 1,2,4-Trimethylbenzene                               | µg/m³      | 95-63-6    | 8400 J  | 209    | -                      | -                   | -  | -   | 8.4  | 5.1   | 5.0   | 11 J  | 32 U  | 9.2 U   |   |
| 1,2-Dibromoethane (Ethylene dibromide)               | µg/m³      | 106-93-4   | ND      | 0      | -                      | -                   | -  | -   | 0.34 U   | 1.4 U   | 1.4 U   | 10 U  | 35 U  | 10 U  |   |
| 1,2-Dichlorobenzene                                  | µg/m³      | 95-50-1    | ND      | 695    | -                      | -                   | -  | -   | 0.42 U   | 1.7 U   | 1.7 U   | 12 U  | 43 U  | 12 U  |   |
| 1,2-Dichloroethane                                   | µg/m³      | 107-06-2   | 1       | 4      | -                      | -                   | -  | -   | 0.19 U   | 0.76 U  | 0.76 U  | 5.6 U   | 20 U  | 5.6 U   |   |
| 1,2-Dichloropropane                                  | µg/m³      | 78-87-5    | ND      | 14     | -                      | -                   | -  | -   | 0.24 U   | 0.96 U  | 0.96 U  | 7.1 U   | 25 U  | 7.1 U   |   |
| 1,2-Dichlortetrafluoroethane (CFC 114)               | µg/m³      | 76-14-2    | 310     | -      | -                      | -                   | -  | -   | 8.6  | 0.89 U  | 0.89 U  | 6.6 U   | 23 U  | 6.6 U   |   |
| 1,3,5-Trimethylbenzene                               | µg/m³      | 108-67-8   | 52 J    | 209    | -                      | -                   | -  | -   | 2.2  | 1.4 J   | 1.3 J   | 9.5 U   | 33 U  | 9.5 U   |   |
| 1,3-Butadiene  | µg/m³      | 106-99-0   | ND      | 3      | -                      | -                   | -  | -   | 0.14 U   | 0.57 U  | 0.57 U  | 4.2 U   | 15 U  | 4.2 U   |   |
| 1,3-Dichlorobenzene                                  | µg/m³      | 541-73-1   | 6.9     | -      | -                      | -                   | -  | -   | 0.39 U   | 1.6 U   | 1.6 U   | 12 U  | 40 U  | 12 U  |   |
| 1,3-Dichloropropene                                  | µg/m³      | 542-75-6   | ND      | 23     | -                      | -                   | -  | -   | ND   | ND  | ND  | ND  | ND  | ND  |   |
| 1,4-Dichlorobenzene                                  | µg/m³      | 106-46-7   | 74 J    | 9      | -                      | -                   | -  | -   | 0.38 U   | 1.5 U   | 1.5 U   | 11 U  | 40 U  | 11 U  |   |
| 1,4-Dioxane  | µg/m³      | 123-91-1   | 0.73 J  | 19     | -                      | -                   | -  | -   | 0.29 U   | 1.2 U   | 1.2 U   | 8.5 U   | 30 U  | 8.5 U   |   |
| 2,2,4-Trimethylpentane                               | µg/m³      | 540-84-1   | 1800000 | -      | -                      | -                   | -  | -   | 0.44 J   | 0.73 U  | 0.73 U  | 5.4 U   | 3600  | 190   |   |
| 2-Butanone (Methyl ethyl ketone) (MEK)               | µg/m³      | 78-93-3    | 35 J    | 17400  | -                      | -                   | -  | -   | 5.9  | 5.9 J   | 2.6 J   | 17 U  | 61 U  | 35 J  |   |
| 2-Chlorotoluene                                      | µg/m³      | 95-49-8    | 1.5 J   | -      | -                      | -                   | -  | -   | 0.33 U   | 1.3 U   | 1.3 U   | 9.7 U   | 34 U  | 9.7 U   |   |
| 2-Hexanone   | µg/m³      | 591-78-6   | 8.9 J   | 104    | -                      | -                   | -  | -   | 0.97 J   | 0.95 U  | 0.95 U  | 7.0 U   | 24 U  | 7.0 U   |   |
| 2-Phenylbutane (sec-Butylbenzene)                    | µg/m³      | 135-98-8   | 47 J    | -      | -                      | -                   | -  | -   | 0.35 U   | 1.4 U   | 1.4 U   | 10 U  | 36 U  | 10 U  |   |
| 4-Ethyl tolune                                       | µg/m³      | 622-96-8   | 72 J    | -      | -                      | -                   | -  | -   | 1.9 J  | 1.3 U   | 1.3 U   | 9.6 U   | 33 U  | 9.6 U   |   |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/m³      | 108-10-1   | 4.3     | 10400  | -                      | -                   | -  | -   | 1.1 J  | 3.2 U   | 3.2 U   | 24 U  | 82 U  | 24 U  |   |
| Acetone  | µg/m³      | 67-64-1    | 460     | 107000 | -                      | -                   | -  | -   | 58   | 54 J  | 28 J  | 98 U  | 340 U   | 340 J   |   |
| Allyl chloride                                       | µg/m³      | 107-05-1   | ND      | 3      | -                      | -                   | -  | -   | 0.15 U   | 0.60 U  | 0.60 U  | 4.4 U   | 15 U  | 4.4 U   |   |
| Benzene  | µg/m³      | 71-43-2    | 110000  | 12     | -                      | -                   | -  | -   | 0.32 J   | 0.72 U  | 0.72 U  | 5.3 U   | 18 U  | 45 <sup>a</sup>                                 |   |
| Benzyl chloride                                      | µg/m³      | 100-44-7   | ND      | 2      | -                      | -                   | -  | -   | 0.40 U   | 1.6 U   | 1.6 U   | 12 U  | 42 U  | 12 U  |   |
| Bromodichloromethane                                 | µg/m³      | 75-27-4    | ND      | 3      | -                      | -                   | -  | -   | 0.29 U   | 1.2 U   | 1.2 U   | 8.7 U   | 30 U  | 8.7 U   |   |
| Bromoform  | µg/m³      | 75-25-2    | ND      | 85     | -                      | -                   | -  | -   | 0.50 U   | 2.0 U   | 2.0 U   | 15 U  | 51 U  | 15 U  |   |
| Bromomethane (Methyl bromide)                        | µg/m³      | 74-83-9    | 0.98 J  | 17     | -                      | -                   | -  | -   | 0.12 U   | 0.50 U  | 0.50 U  | 3.7 U   | 13 U  | 3.7 U   |   |
| Butane   | µg/m³      | 106-97-8   | 8100    | -      | -                      | -                   | -  | -   | 13   | 1.1 J   | 0.69 U  | 5.1 U   | 6800  | 940   |   |
| Carbon disulfide                                     | µg/m³      | 75-15-0    | 270 J   | 2430   | -                      | -                   | -  | -   | 14   | 5.9 J   | 4.2 J   | 26 J  | 11 J  | 40 J  |   |
| Carbon tetrachloride                                 | µg/m³      | 56-23-5    | 36      | 16     | -                      | -                   | 160  | 1600  | 0.24 U   | 0.96 U  | 0.96 U  | 9.2 J   | 25 U  | 7.1 U   |   |
| Chlorobenzene  | µg/m³      | 108-90-7   | 110000  | 174    | -                      | -                   | -  | -   | 0.23 U   | 0.90 U  | 0.90 U  | 6.7 U   | 23 U  | 6.7 U   |   |
| Chlorodifluoromethane                                | µg/m³      | 75-45-6    | 580     | 174000 | -                      | -                   | -  | -   | 0.94   | 7.3   | 5.4   | 7.7 J   | 110   | 3.9 U   |   |
| Chloroethane   | µg/m³      | 75-00-3    | 550     | 34800  | -                      | -                   | -  | -   | 0.97   | 0.37 U  | 0.37 U  | 12 J  | 9.5 U   | 9.2 J   |   |
| Chloroform (Trichloromethane)                        | µg/m³      | 67-66-3    | 110 J   | 4      | -                      | -                   | 41   | 410   | 3.6  | 7.6 <sup>a</sup>                                | 7.4 <sup>a</sup>                                | 17 J <sup>a</sup>                               | 19 U  | 5.5 U   |   |
| Chloromethane (Methyl chloride)                      | µg/m³      | 74-87-3    | 3.5     | 313    | -                      | -                   | -  | -   | 0.46 J   | 1.3 U   | 1.3 U   | 9.8 U   | 34 U  | 9.8 U   |   |
| cis-1,2-Dichloroethene                               | µg/m³      | 156-59-2   | 1700    | -      | -                      | -                   | -  | -   | 0.24 U   | 3.5   | 3.1 J   | 1400  | 24 U  | 1700  |   |
| cis-1,3-Dichloropropene                              | µg/m³      | 10061-01-5 | ND      | -      | -                      | -                   | -  | -   | 0.34 U   | 1.3 U   | 1.3 U   | 9.9 U   | 35 U  | 9.9 U   |   |
| Cyclohexane  | µg/m³      | 110-82-7   | 230000  | 20900  | -                      | -                   | -  | -   | 3.7  | 0.55 U  | 0.55 U  | 4.1 U   | 49 J  | 160   |   |
| Cymene (p-Isopropyltoluene)                          | µg/m³      | 99-87-6    | 0.46 J  | -      | -                      | -                   | -  | -   | 0.31 U   | 1.3 U   | 1.3 U   | 9.3 U   | 32 U  | 9.3 U   |   |
| Dibromochloromethane                                 | µg/m³      | 124-48-1   | ND      | -      | -                      | -                   | -  | -   | 0.36 U   | 1.4 U   | 1.4 U   | 11 U  | 37 U  | 11 U  |   |
| Dichlorodifluoromethane (CFC-12)                     | µg/m³      | 75-71-8    | 570     | 348    | -                      | -                   | -  | -   | 10   | 2.3 J   | 2.3 J   | 10 U  | 35 U  | 10 U  |   |
| Ethylbenzene   | µg/m³      |            |         |        |                        |                     |  |   |  |   |   |   |   |   |   |

Table 4

**Analytical Results Summary and Residential Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date | Parameters        | Units      | CAS#    | Max   | USEPA <sup>1</sup>     |                     | Ohio EPA <sup>2</sup>  |   |  | GP13-09<br>SVA-38443-082018-GL-014<br>8/20/2018 | GP14-09<br>SVA-38443-082018-GL-015<br>8/20/2018 | GP14-09<br>SVA-38443-082018-GL-016<br>8/20/2018 | GP15-09<br>SVA-38443-082018-GL-017<br>8/20/2018 | GP16-09<br>SVA-38443-082318-GL-028<br>8/23/2018 | GP19-18<br>SVA-38443-082318-GL-034<br>8/23/2018 |
|---|-------------------|------------|---------|-------|------------------------|---------------------|--|---|--|---|---|---|---|---|---|
|   |                   |            |         |       | Subslab<br>Residential | VISL<br>Residential | Accelerated<br>Response<br>Action Level<br>Residential<br>(24 hours) | Urgent<br>Response<br>Action Level<br>Residential<br>(24 hours) | Chronic<br>Response<br>Action Level<br>Residential |   |   |   |   |   |   |
|   |                   |            |         |       | a                      | b                   | c  | d   | e  |   |   |   |   |   |   |
| Isopropyl alcohol                           | µg/m <sup>3</sup> | 67-63-0    | 160     | 695   | -                      | -                   | -  | -   | 1.6 J  | 4.2 J   | 2.5 J   | 6.8 U   | 24 U  | 76 J  |   |
| Isopropyl benzene                           | µg/m <sup>3</sup> | 98-82-8    | 9800 J  | 1390  | -                      | -                   | -  | -   | 0.29 U   | 1.2 U   | 1.2 U   | 8.7 U   | 30 U  | 8.7 U   |   |
| m&p-Xylenes                                 | µg/m <sup>3</sup> | M/P-XYLENE | 590000  | -     | -                      | -                   | -  | -   | 5.1  | 3.0 J   | 2.8 J   | 15 U  | 54 U  | 47  |   |
| Methyl methacrylate                         | µg/m <sup>3</sup> | 80-62-6    | 1.4 J   | 2430  | -                      | -                   | -  | -   | 0.32 U   | 1.3 U   | 1.3 U   | 9.6 U   | 33 U  | 9.6 U   |   |
| Methyl tert butyl ether (MTBE)              | µg/m <sup>3</sup> | 1634-04-4  | ND      | 360   | -                      | -                   | -  | -   | 0.61 U   | 2.5 U   | 2.5 U   | 18 U  | 63 U  | 18 U  |   |
| Methylene chloride                          | µg/m <sup>3</sup> | 75-09-2    | 40      | 2090  | -                      | -                   | -  | -   | 2.4  | 4.4 U   | 5.0 J   | 33 U  | 110 U   | 33 U  |   |
| Naphthalene                                 | µg/m <sup>3</sup> | 91-20-3    | 1.5 J   | 3     | -                      | -                   | 28   | 280   | 1.0 J  | 1.9 UJ  | 1.9 UJ  | 14 UJ   | 49 UJ   | 14 U  |   |
| N-Butylbenzene                              | µg/m <sup>3</sup> | 104-51-8   | 16 J    | -     | -                      | -                   | -  | -   | 2.0 J  | 1.3 J   | 1.3 J   | 7.5 U   | 26 U  | 7.5 U   |   |
| N-Heptane                                   | µg/m <sup>3</sup> | 142-82-5   | 1100000 | 1390  | -                      | -                   | -  | -   | 0.44 J   | 0.77 U  | 0.77 U  | 5.7 U   | 20 U  | 330   |   |
| N-Propylbenzene                             | µg/m <sup>3</sup> | 103-65-1   | 95 J    | 3480  | -                      | -                   | -  | -   | 1.1 J  | 1.1 U   | 1.1 U   | 8.1 U   | 28 U  | 8.1 U   |   |
| o-Xylene                                    | µg/m <sup>3</sup> | 95-47-6    | 180000  | 348   | -                      | -                   | -  | -   | 2.6  | 1.5 J   | 1.6 J   | 7.8 U   | 27 U  | 18 J  |   |
| Styrene                                     | µg/m <sup>3</sup> | 100-42-5   | 3.5     | 3480  | -                      | -                   | -  | -   | 0.82 J   | 0.99 U  | 0.99 U  | 7.3 U   | 25 U  | 7.3 U   |   |
| tert-Butyl alcohol                          | µg/m <sup>3</sup> | 75-65-0    | 11 J    | -     | -                      | -                   | -  | -   | 4.4 J  | 2.6 J   | 0.64 J  | 5.3 J   | 12 U  | 8.3 J   |   |
| tert-Butylbenzene                           | µg/m <sup>3</sup> | 98-06-6    | 5.7 J   | -     | -                      | -                   | -  | -   | 0.36 U   | 1.4 U   | 1.4 U   | 11 U  | 37 U  | 11 U  |   |
| Tetrachloroethene                           | µg/m <sup>3</sup> | 127-18-4   | 550     | 139   | -                      | -                   | 1400   | 4200  | 1.3 J  | 330 <sup>a</sup>                                | 370 <sup>a</sup>                                | 25 J  | 28 U  | 8.0 U   |   |
| Tetrahydrofuran                             | µg/m <sup>3</sup> | 109-99-9   | 4.7 J   | 6950  | -                      | -                   | -  | -   | 0.57 J   | 0.74 U  | 1.0 J   | 5.5 U   | 19 U  | 5.5 U   |   |
| Toluene                                     | µg/m <sup>3</sup> | 108-88-3   | 1700000 | 17400 | -                      | -                   | -  | -   | 4.8  | 1.9 J   | 1.9 J   | 13 U  | 47 U  | 71  |   |
| trans-1,2-Dichloroethene                    | µg/m <sup>3</sup> | 156-60-5   | 330     | -     | -                      | -                   | -  | -   | 0.20 U   | 1.0 J   | 1.0 J   | 57  | 20 U  | 30  |   |
| trans-1,3-Dichloropropene                   | µg/m <sup>3</sup> | 10061-02-6 | ND      | -     | -                      | -                   | -  | -   | 0.22 U   | 0.87 U  | 0.87 U  | 6.4 U   | 22 U  | 6.4 U   |   |
| Trichloroethene                             | µg/m <sup>3</sup> | 79-01-6    | 27000   | 7     | 70                     | 210                 | -  | -   | 1.3  | 520 <sup>abc</sup>                              | 510 <sup>abc</sup>                              | 3400 <sup>abc</sup>                             | 20 U  | 13 J <sup>a</sup>                               |   |
| Trichlorofluoromethane (CFC-11)             | µg/m <sup>3</sup> | 75-69-4    | 8.7     | -     | -                      | -                   | -  | -   | 0.88 J   | 1.6 J   | 1.7 J   | 4.0 U   | 14 U  | 4.0 U   |   |
| Trifluorotrichloroethane (CFC-113)          | µg/m <sup>3</sup> | 76-13-1    | 6.6     | 17400 | -                      | -                   | -  | -   | 6.6  | 0.95 U  | 0.95 U  | 7.0 U   | 24 U  | 7.0 U   |   |
| Vinyl bromide (Bromoethene)                 | µg/m <sup>3</sup> | 593-60-2   | ND      | 3     | -                      | -                   | -  | -   | 0.15 U   | 0.61 U  | 0.61 U  | 4.5 U   | 16 U  | 4.5 U   |   |
| Vinyl chloride                              | µg/m <sup>3</sup> | 75-01-4    | 2500    | 6     | -                      | -                   | 56   | 560   | 3.1  | 0.73 U  | 0.73 U  | 14 J <sup>a</sup>                               | 370 <sup>ad</sup>                               | 2500 <sup>ade</sup>                             |   |
| Xylenes (total)                             | µg/m <sup>3</sup> | 1330-20-7  | 770000  | 348   | -                      | -                   | -  | -   | 7.7  | 4.5   | 4.4   | ND  | ND  | 65  |   |
| Total VOCs                                  | µg/m <sup>3</sup> | -          | -       | -     | -                      | -                   | -  | -   | 508.83   | 968.5   | 966.87  | 8199.4  | 11205   | 6982.5  |   |

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UU - Not detected; associated reporting limit is estimated.

1 - USEPA sub slab or exterior soil gas concentration Vapor Intrusion Screening Levels (VISLs) based on cancer risk 1E 06 and hazard quotient (HQ)=0.1

2 - Ohio EPA accelerated and urgent response action levels and chronic response action level and removal management levels, from the Ohio EPA Guidance Document titled "Recommendations Regarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio", dated August 2016.

Table 4

**Analytical Results Summary and Residential Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayon Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date          | Parameters        | Units      | CAS#    | Max    | USEPA <sup>1</sup>     |                     | Ohio EPA <sup>2</sup>  |   |  | Near GP19<br>SVA-38443-082318-GL-033<br>8/23/2018 | GP20-18<br>SVA-38443-082318-GL-030<br>8/23/2018 | GP21-09<br>SVA-38443-081418-GL-001<br>8/14/2018 | GP22-13<br>SVA-38443-082318-GL-031<br>8/23/2018 | GP22-13<br>SVA-38443-082318-GL-032<br>8/23/2018 | GP23-13<br>SVA-38443-082218-GL-025<br>8/22/2018 |
|--|-------------------|------------|---------|--------|------------------------|---------------------|--|---|--|---|---|---|---|---|---|
|  |                   |            |         |        | Substab<br>Residential | VISL<br>Residential | Accelerated<br>Response<br>Action Level<br>Residential<br>(24 hours) | Urgent<br>Response<br>Action Level<br>Residential<br>(24 hours) | Chronic<br>Response<br>Action Level<br>Residential | Removal<br>Management Level<br>Residential        |   |   |   |   |   |
| a  | b                 | c          | d       | e      |                        |                     |  |   |  |   |   |   |   |   | Duplicate                                       |
| <b>Volatiles</b>                                     |                   |            |         |        |                        |                     |  |   |  |   |   |   |   |   |   |
| 1,1,1-Trichloroethane                                | µg/m <sup>3</sup> | 71-55-6    | 33      | 17400  | -                      | -                   | -  | -   | 0.16 U   | 22 U  | 3.3 U   | 0.27 J  | 0.26 J  | 1.6 J   |   |
| 1,1,2,2-Tetrachloroethane                            | µg/m <sup>3</sup> | 79-34-5    | ND      | 2      | -                      | -                   | -  | -   | 0.42 U   | 57 U  | 8.4 U   | 0.42 U  | 0.42 U  | 1.7 U   |   |
| 1,1,2-Trichloroethane                                | µg/m <sup>3</sup> | 79-00-5    | ND      | 1      | -                      | -                   | -  | -   | 0.29 U   | 40 U  | 5.9 U   | 0.29 U  | 0.29 U  | 1.2 U   |   |
| 1,1-Dichloroethane                                   | µg/m <sup>3</sup> | 75-34-3    | 3200    | 59     | -                      | -                   | -  | -   | 0.11 U   | 14 U  | 4.3 J   | 1.7   | 1.7   | 0.42 U  |   |
| 1,1-Dichloroethene                                   | µg/m <sup>3</sup> | 75-35-4    | 24      | 695    | -                      | -                   | -  | -   | 0.13 U   | 18 U  | 2.7 U   | 1.7   | 1.7   | 0.54 U  |   |
| 1,2,4-Trichlorobenzene                               | µg/m <sup>3</sup> | 120-82-1   | ND      | 7      | -                      | -                   | -  | -   | 0.73 U   | 99 U  | 15 UJ   | 0.73 U  | 0.73 U  | 2.9 U   |   |
| 1,2,4-Trimethylbenzene                               | µg/m <sup>3</sup> | 95-63-6    | 8400 J  | 209    | -                      | -                   | -  | -   | 0.31 U   | 42 U  | 6.2 U   | 1.6   | 1.5   | 3.0 J   |   |
| 1,2-Dibromoethane (Ethylene dibromide)               | µg/m <sup>3</sup> | 106-93-4   | ND      | 0      | -                      | -                   | -  | -   | 0.34 U   | 46 U  | 6.8 U   | 0.34 U  | 0.34 U  | 1.4 U   |   |
| 1,2-Dichlorobenzene                                  | µg/m <sup>3</sup> | 95-50-1    | ND      | 695    | -                      | -                   | -  | -   | 0.42 U   | 57 U  | 8.4 U   | 0.42 U  | 0.42 U  | 1.7 U   |   |
| 1,2-Dichloroethane                                   | µg/m <sup>3</sup> | 107-06-2   | 1       | 4      | -                      | -                   | -  | -   | 0.19 U   | 26 U  | 3.8 U   | 1.0   | 0.95  | 0.76 U  |   |
| 1,2-Dichloropropane                                  | µg/m <sup>3</sup> | 78-87-5    | ND      | 14     | -                      | -                   | -  | -   | 0.24 U   | 33 U  | 4.8 U   | 0.24 U  | 0.24 U  | 0.96 U  |   |
| 1,2-Dichlortetrafluoroethane (CFC 114)               | µg/m <sup>3</sup> | 76-14-2    | 310     | -      | -                      | -                   | -  | -   | 0.22 U   | 30 U  | 4.5 U   | 0.22 U  | 0.22 U  | 0.89 U  |   |
| 1,3,5-Trimethylbenzene                               | µg/m <sup>3</sup> | 108-67-8   | 52 J    | 209    | -                      | -                   | -  | -   | 0.32 U   | 43 U  | 6.4 U   | 0.37 J  | 0.37 J  | 1.3 U   |   |
| 1,3-Butadiene  | µg/m <sup>3</sup> | 106-99-0   | ND      | 3      | -                      | -                   | -  | -   | 0.14 U   | 19 U  | 2.8 U   | 0.14 U  | 0.14 U  | 0.57 U  |   |
| 1,3-Dichlorobenzene                                  | µg/m <sup>3</sup> | 541-73-1   | 6.9     | -      | -                      | -                   | -  | -   | 0.39 U   | 53 U  | 7.8 U   | 0.58 J  | 0.64 J  | 1.6 U   |   |
| 1,3-Dichloropropene                                  | µg/m <sup>3</sup> | 542-75-6   | ND      | 23     | -                      | -                   | -  | -   | ND   | ND  | ND  | ND  | ND  | ND  |   |
| 1,4-Dichlorobenzene                                  | µg/m <sup>3</sup> | 106-46-7   | 74 J    | 9      | -                      | -                   | -  | -   | 0.38 U   | 52 U  | 7.7 U   | 0.38 U  | 0.38 U  | 1.5 U   |   |
| 1,4-Dioxane  | µg/m <sup>3</sup> | 123-91-1   | 0.73 J  | 19     | -                      | -                   | -  | -   | 0.73 J   | 39 U  | 5.8 U   | 0.29 U  | 0.29 U  | 1.2 U   |   |
| 2,2,4-Trimethylpentane                               | µg/m <sup>3</sup> | 540-84-1   | 1800000 | -      | -                      | -                   | -  | -   | 0.18 U   | 25 U  | 33 J  | 0.18 U  | 0.18 U  | 1.2 J   |   |
| 2-Butanone (Methyl ethyl ketone) (MEK)               | µg/m <sup>3</sup> | 78-93-3    | 35 J    | 17400  | -                      | -                   | -  | -   | 1.2 J  | 80 U  | 12 U  | 13  | 12  | 17  |   |
| 2-Chlorotoluene                                      | µg/m <sup>3</sup> | 95-49-8    | 1.5 J   | -      | -                      | -                   | -  | -   | 0.33 U   | 44 U  | 6.5 U   | 0.33 U  | 0.33 U  | 1.3 U   |   |
| 2-Hexanone   | µg/m <sup>3</sup> | 591-78-6   | 8.9 J   | 104    | -                      | -                   | -  | -   | 0.24 U   | 32 U  | 4.8 U   | 2.9   | 2.7   | 2.6 J   |   |
| 2-Phenylbutane (sec-Butylbenzene)                    | µg/m <sup>3</sup> | 135-98-8   | 47 J    | -      | -                      | -                   | -  | -   | 0.35 U   | 48 U  | 7.0 U   | 0.35 U  | 0.35 U  | 1.4 U   |   |
| 4-Ethyl tolune                                       | µg/m <sup>3</sup> | 622-96-8   | 72 J    | -      | -                      | -                   | -  | -   | 0.32 U   | 44 U  | 6.5 U   | 0.32 U  | 0.32 J  | 1.3 U   |   |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/m <sup>3</sup> | 108-10-1   | 4.3     | 10400  | -                      | -                   | -  | -   | 4.3  | 110 U   | 16 U  | 3.8   | 0.80 U  | 3.2 U   |   |
| Acetone  | µg/m <sup>3</sup> | 67-64-1    | 460     | 107000 | -                      | -                   | -  | -   | 12   | 450 U   | 67 U  | 66  | 56  | 77  |   |
| Allyl chloride                                       | µg/m <sup>3</sup> | 107-05-1   | ND      | 3      | -                      | -                   | -  | -   | 0.15 U   | 20 U  | 3.0 U   | 0.15 U  | 0.15 U  | 0.60 U  |   |
| Benzene  | µg/m <sup>3</sup> | 71-43-2    | 110000  | 12     | -                      | -                   | -  | -   | 0.45 J   | 24 U  | 15 <sup>a</sup>                                 | 0.83  | 0.89  | 0.84 J  |   |
| Benzyl chloride                                      | µg/m <sup>3</sup> | 100-44-7   | ND      | 2      | -                      | -                   | -  | -   | 0.40 U   | 55 U  | 8.1 U   | 0.40 U  | 0.40 U  | 1.6 U   |   |
| Bromodichloromethane                                 | µg/m <sup>3</sup> | 75-27-4    | ND      | 3      | -                      | -                   | -  | -   | 0.29 U   | 40 U  | 5.9 U   | 0.29 U  | 0.29 U  | 1.2 U   |   |
| Bromoform  | µg/m <sup>3</sup> | 75-25-2    | ND      | 85     | -                      | -                   | -  | -   | 0.50 U   | 67 U  | 9.9 U   | 0.50 U  | 0.50 U  | 2.0 U   |   |
| Bromomethane (Methyl bromide)                        | µg/m <sup>3</sup> | 74-83-9    | 0.98 J  | 17     | -                      | -                   | -  | -   | 0.12 U   | 17 U  | 2.5 U   | 0.12 U  | 0.30 J  | 0.98 J  |   |
| Butane   | µg/m <sup>3</sup> | 106-97-8   | 8100    | -      | -                      | -                   | -  | -   | 1.0  | 24 U  | 1700  | 73  | 67  | 3.1 J   |   |
| Carbon disulfide                                     | µg/m <sup>3</sup> | 75-15-0    | 270 J   | 2430   | -                      | -                   | -  | -   | 0.26 J   | 13 U  | 13 J  | 7.6   | 8.5   | 14  |   |
| Carbon tetrachloride                                 | µg/m <sup>3</sup> | 56-23-5    | 36      | 16     | -                      | -                   | 160  | 1600  | 0.44 J   | 32 U  | 4.8 U   | 0.24 U  | 0.24 U  | 0.96 U  |   |
| Chlorobenzene  | µg/m <sup>3</sup> | 108-90-7   | 110000  | 174    | -                      | -                   | -  | -   | 0.23 U   | 31 U  | 4.5 U   | 0.37 J  | 0.38 J  | 0.90 U  |   |
| Chlorodifluoromethane                                | µg/m <sup>3</sup> | 75-45-6    | 580     | 174000 | -                      | -                   | -  | -   | 1.7  | 18 U  | 84  | 1.5 J   | 7.2 J   | 1.8 J   |   |
| Chloroethane   | µg/m <sup>3</sup> | 75-00-3    | 550     | 34800  | -                      | -                   | -  | -   | 0.092 U  | 13 U  | 1.8 U   | 0.42 J  | 0.36 J  | 0.37 U  |   |
| Chloroform (Trichloromethane)                        | µg/m <sup>3</sup> | 67-66-3    | 110 J   | 4      | -                      | -                   | 41   | 410   | 0.19 U   | 25 U  | 3.7 U   | 0.37 J  | 0.36 J  | 1.8 J   |   |
| Chloromethane (Methyl chloride)                      | µg/m <sup>3</sup> | 74-87-3    | 3.5     | 313    | -                      | -                   | -  | -   | 1.1  | 45 U  | 6.6 U   | 0.33 U  | 0.33 U  | 1.8 J   |   |
| cis-1,2-Dichloroethene                               | µg/m <sup>3</sup> | 156-59-2   | 1700    | -      | -                      | -                   | -  | -   | 0.24 U   | 770   | 16  | 22  | 23  | 0.95 U  |   |
| cis-1,3-Dichloropropene                              | µg/m <sup>3</sup> | 10061-01-5 | ND      | -      | -                      | -                   | -  | -   | 0.34 U   | 46 U  | 6.7 U   | 0.34 U  | 0.34 U  | 1.3 U   |   |
| Cyclohexane  | µg/m <sup>3</sup> | 110-82-7   | 230000  | 20900  | -                      | -                   | -  | -   | 0.14 U   | 19 U  | 35  | 10  | 10  | 0.55 U  |   |
| Cymene (p-Isopropyltoluene)                          | µg/m <sup>3</sup> | 99-87-6    | 0.46 J  | -      | -                      | -                   | -  | -   | 0.31 U   | 43 U  | 6.3 U   | 0.31 U  | 0.31 U  | 1.3 U   |   |
| Dibromochloromethane                                 | µg/m <sup>3</sup> | 1          |         |        |                        |                     |  |   |  |   |   |   |   |   |   |

Table 4

**Analytical Results Summary and Residential Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date | Parameters        | Units      | CAS#    | Max   | USEPA <sup>1</sup>          |  | Ohio EPA <sup>2</sup>   |  |  | Near GP19<br>SVA-38443-082318-GL-033<br>8/23/2018 | GP20-18<br>SVA-38443-082318-GL-030<br>8/23/2018 | GP21-09<br>SVA-38443-081418-GL-001<br>8/14/2018 | GP22-13<br>SVA-38443-082318-GL-031<br>8/23/2018 | GP22-13<br>SVA-38443-082318-GL-032<br>8/23/2018 | GP23-13<br>SVA-38443-082218-GL-025<br>8/22/2018 |
|---|-------------------|------------|---------|-------|-----------------------------|--|---|--|--|---|---|---|---|---|---|
|   |                   |            |         |       | Subslab VISL<br>Residential | Accelerated<br>Response<br>Action Level<br>Residential<br>(24 hours) | Urgent<br>Response<br>Action Level<br>Residential<br>(24 hours) | Chronic<br>Response<br>Action Level<br>Residential | Removal<br>Management Level<br>Residential |   |   |   |   |   | Duplicate                                       |
|   |                   |            |         |       | a                           | b  | c   | d  | e  |   |   |   |   |   |   |
| Isopropyl alcohol                           | µg/m <sup>3</sup> | 67-63-0    | 160     | 695   | -                           | -  | -   | -  | 0.62 J                                     | 82 J  | 14 J  | 1.9 J   | 3.1 J   | 3.6 J   |   |
| Isopropyl benzene                           | µg/m <sup>3</sup> | 98-82-8    | 9800 J  | 1390  | -                           | -  | -   | -  | 0.29 U                                     | 40 U  | 5.9 U   | 0.29 U  | 0.29 U  | 1.2 U   |   |
| m&p-Xylenes                                 | µg/m <sup>3</sup> | M/P-XYLENE | 590000  | -     | -                           | -  | -   | -  | 0.52 U                                     | 71 U  | 10 U  | 4.4   | 4.7   | 14  |   |
| Methyl methacrylate                         | µg/m <sup>3</sup> | 80-62-6    | 1.4 J   | 2430  | -                           | -  | -   | -  | 0.32 U                                     | 44 U  | 6.5 U   | 0.32 U  | 0.32 U  | 1.3 U   |   |
| Methyl tert butyl ether (MTBE)              | µg/m <sup>3</sup> | 1634-04-4  | ND      | 360   | -                           | -  | -   | -  | 0.61 U                                     | 83 U  | 12 U  | 0.61 U  | 0.61 U  | 2.5 U   |   |
| Methylene chloride                          | µg/m <sup>3</sup> | 75-09-2    | 40      | 2090  | -                           | -  | -   | -  | 1.6 J                                      | 150 U   | 22 U  | 1.2 J   | 4.1 J   | 4.4 U   |   |
| Naphthalene                                 | µg/m <sup>3</sup> | 91-20-3    | 1.5 J   | 3     | -                           | -  | 28  | 280  | 0.47 U                                     | 64 U  | 9.4 UJ  | 0.47 U  | 0.79 J  | 1.9 U   |   |
| N-Butylbenzene                              | µg/m <sup>3</sup> | 104-51-8   | 16 J    | -     | -                           | -  | -   | -  | 0.25 U                                     | 34 U  | 5.1 U   | 0.49 J  | 0.40 J  | 1.0 U   |   |
| N-Heptane                                   | µg/m <sup>3</sup> | 142-82-5   | 1100000 | 1390  | -                           | -  | -   | -  | 0.22 J                                     | 26 U  | 4.0 J   | 1.9 J   | 2.3   | 1.5 J   |   |
| N-Propylbenzene                             | µg/m <sup>3</sup> | 103-65-1   | 95 J    | 3480  | -                           | -  | -   | -  | 0.28 U                                     | 37 U  | 5.5 U   | 0.28 U  | 0.28 U  | 1.1 U   |   |
| o-Xylene                                    | µg/m <sup>3</sup> | 95-47-6    | 180000  | 348   | -                           | -  | -   | -  | 0.26 U                                     | 36 U  | 5.3 U   | 1.3   | 1.2   | 5.1   |   |
| Styrene                                     | µg/m <sup>3</sup> | 100-42-5   | 3.5     | 3480  | -                           | -  | -   | -  | 0.25 U                                     | 34 U  | 4.9 U   | 0.25 J  | 0.27 J  | 0.99 U  |   |
| tert-Butyl alcohol                          | µg/m <sup>3</sup> | 75-65-0    | 11 J    | -     | -                           | -  | -   | -  | 0.12 U                                     | 16 U  | 2.3 U   | 2.3 J   | 1.9 J   | 4.1 J   |   |
| tert-Butylbenzene                           | µg/m <sup>3</sup> | 98-06-6    | 5.7 J   | -     | -                           | -  | -   | -  | 0.36 U                                     | 49 U  | 7.2 U   | 1.8 J   | 1.7 J   | 1.4 U   |   |
| Tetrachloroethene                           | µg/m <sup>3</sup> | 127-18-4   | 550     | 139   | -                           | -  | 1400  | 4200   | 0.78 J                                     | 37 U  | 5.4 U   | 1.9   | 1.3 J   | 1.1 U   |   |
| Tetrahydrofuran                             | µg/m <sup>3</sup> | 109-99-9   | 4.7 J   | 6950  | -                           | -  | -   | -  | 0.19 U                                     | 25 U  | 3.7 U   | 0.19 U  | 0.19 U  | 0.74 U  |   |
| Toluene                                     | µg/m <sup>3</sup> | 108-88-3   | 1700000 | 17400 | -                           | -  | -   | -  | 0.70 J                                     | 61 U  | 9.0 U   | 1.3   | 1.7   | 7.8   |   |
| trans-1,2-Dichloroethene                    | µg/m <sup>3</sup> | 156-60-5   | 330     | -     | -                           | -  | -   | -  | 0.20 U                                     | 37 J  | 4.0 U   | 3.5   | 3.5   | 1.8 J   |   |
| trans-1,3-Dichloropropene                   | µg/m <sup>3</sup> | 10061-02-6 | ND      | -     | -                           | -  | -   | -  | 0.22 U                                     | 30 U  | 4.4 U   | 0.22 U  | 0.22 U  | 0.87 U  |   |
| Trichloroethene                             | µg/m <sup>3</sup> | 79-01-6    | 27000   | 7     | 70                          | 210  | -   | -  | 0.19 U                                     | 670 <sup>abc</sup>                                | 3.9 U   | 2.7   | 2.3   | 600 <sup>abc</sup>                              |   |
| Trichlorofluoromethane (CFC-11)             | µg/m <sup>3</sup> | 75-69-4    | 8.7     | -     | -                           | -  | -   | -  | 1.2  | 18 U  | 2.7 U   | 0.13 U  | 0.36 J  | 7.3   |   |
| Trifluorotrichloroethane (CFC-113)          | µg/m <sup>3</sup> | 76-13-1    | 6.6     | 17400 | -                           | -  | -   | -  | 0.52 J                                     | 32 U  | 4.8 U   | 0.24 U  | 0.24 U  | 0.95 U  |   |
| Vinyl bromide (Bromoethene)                 | µg/m <sup>3</sup> | 593-60-2   | ND      | 3     | -                           | -  | -   | -  | 0.15 U                                     | 21 U  | 3.1 U   | 0.15 U  | 0.15 U  | 0.61 U  |   |
| Vinyl chloride                              | µg/m <sup>3</sup> | 75-01-4    | 2500    | 6     | -                           | -  | 56  | 560  | 0.18 U                                     | 25 U  | 3.6 U   | 42 <sup>a</sup>                                 | 38 <sup>a</sup>                                 | 0.73 U  |   |
| Xylenes (total)                             | µg/m <sup>3</sup> | 1330-20-7  | 770000  | 348   | -                           | -  | -   | -  | ND   | ND  | ND  | 5.7   | 5.9   | 19.1  |   |
| Total VOCs                                  | µg/m <sup>3</sup> | -          | -       | -     | -                           | -  | -   | -  | 30.84                                      | 7589  | 1970.3  | 290.25  | 279.35  | 797.52  |   |

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UU - Not detected; associated reporting limit is estimated.

1 - USEPA sub slab or exterior soil gas concentration Vapor Intrusion Screening Levels (VISLs) based on cancer risk 1E 06 and hazard quotient (HQ)=0.1

2 - Ohio EPA accelerated and urgent response action levels and chronic response action level and removal management levels, from the Ohio EPA Guidance Document titled "Recommendations Regarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio", dated August 2016.

Table 4

**Analytical Results Summary and Residential Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayon Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location                                      | GP24A-13<br>SVA-38443-082218-GL-024<br>8/22/2018  | GP24B-13<br>SVA-38443-082218-GL-023<br>8/22/2018  | GP25-18<br>SVA-38443-081418-GL-006<br>8/14/2018                 | GP26-18<br>SVA-38443-081418-GL-005<br>8/14/2018    | GP27-18<br>SVA-38443-081518-GL-010<br>8/15/2018 | GP28-18<br>SVA-38443-081518-GL-007<br>8/15/2018 |        |                 |        |                 |                   |                   |       |
|--|---|---|---|--|---|---|--------|-----------------|--------|-----------------|-------------------|-------------------|-------|
| Sample ID  |   |   |   |  |   |   |        |                 |        |                 |                   |                   |       |
| Sample Date  |   |   |   |  |   |   |        |                 |        |                 |                   |                   |       |
| Parameters   | USEPA <sup>1</sup><br>Substab VISL<br>Residential | Ohio EPA <sup>2</sup><br>Accelerated<br>Response<br>Action Level<br>Residential<br>(24 hours) | Urgent<br>Response<br>Action Level<br>Residential<br>(24 hours) | Chronic<br>Response<br>Action Level<br>Residential | Removal<br>Management Level<br>Residential      |   |        |                 |        |                 |                   |                   |       |
|  | a   | b   | c   | d  | e   |   |        |                 |        |                 |                   |                   |       |
| <b>Volatiles</b>                                     |   |   |   |  |   |   |        |                 |        |                 |                   |                   |       |
| 1,1,1-Trichloroethane                                | µg/m <sup>3</sup>                                 | 71-55-6   | 33  | 17400  | -   | -   | 2.2    | 0.69 J          | 3.8 J  | 7.3 U           | 19 U              | 7.4 U             |       |
| 1,1,2,2-Tetrachloroethane                            | µg/m <sup>3</sup>                                 | 79-34-5   | ND  | 2  | -   | -   | 0.42 U | 0.42 U          | 8.4 U  | 19 U            | 48 U              | 19 U              |       |
| 1,1,2-Trichloroethane                                | µg/m <sup>3</sup>                                 | 79-00-5   | ND  | 1  | -   | -   | 0.29 U | 0.29 U          | 5.9 U  | 13 U            | 34 U              | 13 U              |       |
| 1,1-Dichloroethane                                   | µg/m <sup>3</sup>                                 | 75-34-3   | 3200  | 59   | -   | -   | 0.11 U | 0.11 U          | 29     | 30 J            | 41 J              | 19 J              |       |
| 1,1-Dichloroethene                                   | µg/m <sup>3</sup>                                 | 75-35-4   | 24  | 695  | -   | -   | 0.13 U | 0.13 U          | 24     | 6.1 U           | 15 U              | 6.1 U             |       |
| 1,2,4-Trichlorobenzene                               | µg/m <sup>3</sup>                                 | 120-82-1  | ND  | 7  | -   | -   | 0.73 U | 0.73 UJ         | 15 UJ  | 33 UJ           | 83 UJ             | 33 UJ             |       |
| 1,2,4-Trimethylbenzene                               | µg/m <sup>3</sup>                                 | 95-63-6   | 8400 J  | 209  | -   | -   | 2.6    | 1.6             | 12 J   | 22 J            | 120               | 14 U              |       |
| 1,2-Dibromoethane (Ethylene dibromide)               | µg/m <sup>3</sup>                                 | 106-93-4  | ND  | 0  | -   | -   | 0.34 U | 0.34 U          | 6.8 U  | 15 U            | 38 U              | 15 U              |       |
| 1,2-Dichlorobenzene                                  | µg/m <sup>3</sup>                                 | 95-50-1   | ND  | 695  | -   | -   | 0.42 U | 0.42 U          | 8.4 U  | 19 U            | 48 U              | 19 U              |       |
| 1,2-Dichloroethane                                   | µg/m <sup>3</sup>                                 | 107-06-2  | 1   | 4  | -   | -   | 0.19 U | 0.19 U          | 3.8 U  | 8.5 U           | 22 U              | 8.7 U             |       |
| 1,2-Dichloropropane                                  | µg/m <sup>3</sup>                                 | 78-87-5   | ND  | 14   | -   | -   | 0.24 U | 0.24 U          | 4.8 U  | 11 U            | 27 U              | 11 U              |       |
| 1,2-Dichlortetrafluoroethane (CFC 114)               | µg/m <sup>3</sup>                                 | 76-14-2   | 310   | -  | -   | -   | 0.22 U | 0.22 U          | 28     | 32 J            | 25 U              | 10 U              |       |
| 1,3,5-Trimethylbenzene                               | µg/m <sup>3</sup>                                 | 108-67-8  | 52 J  | 209  | -   | -   | 0.58 J | 0.46 J          | 6.4 U  | 14 U            | 52 J              | 15 U              |       |
| 1,3-Butadiene  | µg/m <sup>3</sup>                                 | 106-99-0  | ND  | 3  | -   | -   | 0.14 U | 0.14 U          | 2.8 U  | 6.4 U           | 16 U              | 6.4 U             |       |
| 1,3-Dichlorobenzene                                  | µg/m <sup>3</sup>                                 | 541-73-1  | 6.9   | -  | -   | -   | 2.7    | 0.39 U          | 7.8 U  | 18 U            | 44 U              | 18 U              |       |
| 1,3-Dichloropropene                                  | µg/m <sup>3</sup>                                 | 542-75-6  | ND  | 23   | -   | -   | ND     | ND              | ND     | ND              | ND                | ND                |       |
| 1,4-Dichlorobenzene                                  | µg/m <sup>3</sup>                                 | 106-46-7  | 74 J  | 9  | -   | -   | 0.38 U | 0.38 U          | 7.7 U  | 17 U            | 74 J <sup>a</sup> | 18 U              |       |
| 1,4-Dioxane  | µg/m <sup>3</sup>                                 | 123-91-1  | 0.73 J  | 19   | -   | -   | 0.29 U | 0.29 U          | 5.8 U  | 13 U            | 33 U              | 13 U              |       |
| 2,2,4-Trimethylpentane                               | µg/m <sup>3</sup>                                 | 540-84-1  | 1800000   | -  | -   | -   | 0.41 J | 1.2 J           | 10 J   | 16 J            | 21 U              | 8.3 U             |       |
| 2-Butanone (Methyl ethyl ketone) (MEK)               | µg/m <sup>3</sup>                                 | 78-93-3   | 35 J  | 17400  | -   | -   | 18     | 5.3             | 12 U   | 26 U            | 67 U              | 27 U              |       |
| 2-Chlorotoluene                                      | µg/m <sup>3</sup>                                 | 95-49-8   | 1.5 J   | -  | -   | -   | 0.33 U | 0.33 U          | 6.5 U  | 15 U            | 37 U              | 15 U              |       |
| 2-Hexanone   | µg/m <sup>3</sup>                                 | 591-78-6  | 8.9 J   | 104  | -   | -   | 2.8    | 0.90 J          | 4.8 U  | 11 U            | 27 U              | 11 U              |       |
| 2-Phenylbutane (sec-Butylbenzene)                    | µg/m <sup>3</sup>                                 | 135-98-8  | 47 J  | -  | -   | -   | 0.35 U | 0.35 U          | 7.0 U  | 16 U            | 40 U              | 38 J              |       |
| 4-Ethyl toluene                                      | µg/m <sup>3</sup>                                 | 622-96-8  | 72 J  | -  | -   | -   | 0.59 J | 0.52 J          | 6.5 U  | 15 U            | 72 J              | 15 U              |       |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/m <sup>3</sup>                                 | 108-10-1  | 4.3   | 10400  | -   | -   | 3.9    | 1.1 J           | 16 U   | 36 U            | 91 U              | 36 U              |       |
| Acetone  | µg/m <sup>3</sup>                                 | 67-64-1   | 460   | 107000   | -   | -   | 75     | 22              | 67 U   | 150 U           | 380 U             | 150 U             |       |
| Allyl chloride                                       | µg/m <sup>3</sup>                                 | 107-05-1  | ND  | 3  | -   | -   | 0.15 U | 0.15 U          | 3.0 U  | 6.7 U           | 17 U              | 6.8 U             |       |
| Benzene  | µg/m <sup>3</sup>                                 | 71-43-2   | 110000  | 12   | -   | -   | 1.2    | 0.43 J          | 3.6 U  | 52 <sup>a</sup> | 410 <sup>a</sup>  | 87 <sup>a</sup>   |       |
| Benzyl chloride                                      | µg/m <sup>3</sup>                                 | 100-44-7  | ND  | 2  | -   | -   | 0.40 U | 0.40 U          | 8.1 U  | 18 U            | 46 U              | 18 U              |       |
| Bromodichloromethane                                 | µg/m <sup>3</sup>                                 | 75-27-4   | ND  | 3  | -   | -   | 0.29 U | 0.29 U          | 5.9 U  | 13 U            | 34 U              | 13 U              |       |
| Bromoform  | µg/m <sup>3</sup>                                 | 75-25-2   | ND  | 85   | -   | -   | 0.50 U | 0.50 U          | 9.9 U  | 22 U            | 56 U              | 23 U              |       |
| Bromomethane (Methyl bromide)                        | µg/m <sup>3</sup>                                 | 74-83-9   | 0.98 J  | 17   | -   | -   | 0.18 J | 0.12 U          | 2.5 U  | 5.6 U           | 14 U              | 5.7 U             |       |
| Butane   | µg/m <sup>3</sup>                                 | 106-97-8  | 8100  | -  | -   | -   | 0.96   | 2.3             | 720    | 1800            | 8100              | 3000              |       |
| Carbon disulfide                                     | µg/m <sup>3</sup>                                 | 75-15-0   | 270 J   | 2430   | -   | -   | 14     | 12              | 28 J   | 240             | 92 J              | 27 J              |       |
| Carbon tetrachloride                                 | µg/m <sup>3</sup>                                 | 56-23-5   | 36  | 16   | -   | 160   | 1600   | 36 <sup>a</sup> | 4.8 U  | 11 U            | 27 U              | 11 U              |       |
| Chlorobenzene  | µg/m <sup>3</sup>                                 | 108-90-7  | 110000  | 174  | -   | -   | 0.23 J | 0.23 U          | 4.7 J  | 22 J            | 9200 <sup>a</sup> | 1700 <sup>a</sup> |       |
| Chlorodifluoromethane                                | µg/m <sup>3</sup>                                 | 75-45-6   | 580   | 174000   | -   | -   | 1.8    | 17              | 45     | 48              | 15 U              | 12 J              |       |
| Chloroethane   | µg/m <sup>3</sup>                                 | 75-00-3   | 550   | 34800  | -   | -   | 0.14 J | 0.092 U         | 1.8 U  | 550             | 41 J              | 43                |       |
| Chloroform (Trichloromethane)                        | µg/m <sup>3</sup>                                 | 67-66-3   | 110 J   | 4  | -   | 41  | 410    | 0.29 J          | 0.19 U | 3.7 U           | 8.3 U             | 21 U              | 8.4 U |
| Chloromethane (Methyl chloride)                      | µg/m <sup>3</sup>                                 | 74-87-3   | 3.5   | 313  | -   | -   | 0.67 J | 0.47 J          | 6.6 U  | 15 U            | 38 U              | 15 U              |       |
| cis-1,2-Dichloroethene                               | µg/m <sup>3</sup>                                 | 156-59-2  | 1700  | -  | -   | -   | 0.24 U | 0.24 U          | 4.8 U  | 13 J            | 27 U              | 30 J              |       |
| cis-1,3-Dichloropropene                              | µg/m <sup>3</sup>                                 | 10061-01-5  | ND  | -  | -   | -   | 0.34 U | 0.34 U          | 6.7 U  | 15 U            | 38 U              | 15 U              |       |
| Cyclohexane  | µg/m <sup>3</sup>                                 | 110-82-7  | 230000  | 20900  | -   | -   | 0.14 U | 0.53 J          | 24 J   | 72 J            | 350 J             | 150               |       |
| Cymene (p-Isopropyltoluene)                          | µg/m <sup>3</sup>                                 | 99-87-6   | 0.46 J  | -  | -   | -   | 0.31 U | 0.31 U          | 6.3 U  | 14 U            | 36 U              | 14 U              |       |
| Dibromochloromethane                                 | µg/m <sup>3</sup>                                 | 124-48-1  | ND  | -  | -   | -   | 0.36 U | 0.36 U          | 7.2 U  | 16 U            | 41 U              | 16 U              |       |
| Dichlorodifluoromethane (CFC-12)                     | µg/m <sup>3</sup>                                 | 75-71-8   | 570   | 348  | -   | -   | 1.5    | 1.2             | 12 J   | 15 U            | 38 U              | 15 U              |       |
| Ethylbenzene   | µg/m <sup>3</sup>                                 | 100-41-4  | 140000  | 37   | -   | -   | 2.0    | 1.9             | 5.9 U  | 13 U            | 150 <sup>a</sup>  | 13 U              |       |
| Hexachlorobutadiene                                  | µg/m <sup>3</sup>                                 | 87-68-3   | ND  | 4  | -   | -   | 0.83 U | 0.83 UJ         | 17 UJ  | 37 UJ           | 95 UJ             | 38 UJ             |       |
| Hexane   | µg/m <sup>3</sup>                                 | 110-54-3  | 630000  | 2430   | -   | -   | 0.76 J | 4.7             | 38     | 140             | 3100 <sup>a</sup> | 1100              |       |

Table 4

**Analytical Results Summary and Residential Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date | Parameters        | Units      | CAS#    | Max   | USEPA <sup>1</sup>     |      | Ohio EPA <sup>2</sup>  |   |  | GP24A-13<br>SVA-38443-082218-GL-024<br>8/22/2018 | GP24B-13<br>SVA-38443-082218-GL-023<br>8/22/2018 | GP25-18<br>SVA-38443-081418-GL-006<br>8/14/2018 | GP26-18<br>SVA-38443-081418-GL-005<br>8/14/2018 | GP27-18<br>SVA-38443-081518-GL-010<br>8/15/2018 | GP28-18<br>SVA-38443-081518-GL-007<br>8/15/2018 |
|---|-------------------|------------|---------|-------|------------------------|------|--|---|--|--|--|---|---|---|---|
|   |                   |            |         |       | Subslab<br>Residential | VISL | Accelerated<br>Response<br>Action Level<br>Residential<br>(24 hours) | Urgent<br>Response<br>Action Level<br>Residential<br>(24 hours) | Chronic<br>Response<br>Action Level<br>Residential | Removal<br>Management Level<br>Residential       |  |   |   |   |   |
|   |                   |            |         |       | a                      | b    | c  | d   | e  |  |  |   |   |   |   |
| Isopropyl alcohol                           | µg/m <sup>3</sup> | 67-63-0    | 160     | 695   | -                      | -    | -  | -   | 81   | 3.2 J  | 6.7 J  | 10 U  | 26 U  | 11 U  |   |
| Isopropyl benzene                           | µg/m <sup>3</sup> | 98-82-8    | 9800 J  | 1390  | -                      | -    | -  | -   | 1.4 J  | 0.29 U   | 5.9 U  | 13 U  | 34 U  | 71 J  |   |
| m&p-Xylenes                                 | µg/m <sup>3</sup> | M/P-XYLENE | 590000  | -     | -                      | -    | -  | -   | 8.6  | 8.9  | 13 J   | 54  | 350   | 67  |   |
| Methyl methacrylate                         | µg/m <sup>3</sup> | 80-62-6    | 1.4 J   | 2430  | -                      | -    | -  | -   | 0.32 U   | 0.32 U   | 6.5 U  | 15 U  | 37 U  | 15 U  |   |
| Methyl tert butyl ether (MTBE)              | µg/m <sup>3</sup> | 1634-04-4  | ND      | 360   | -                      | -    | -  | -   | 0.61 U   | 0.61 U   | 12 U   | 28 U  | 70 U  | 28 U  |   |
| Methylene chloride                          | µg/m <sup>3</sup> | 75-09-2    | 40      | 2090  | -                      | -    | -  | -   | 1.1 U  | 21   | 40   | 50 U  | 130 U   | 51 U  |   |
| Naphthalene                                 | µg/m <sup>3</sup> | 91-20-3    | 1.5 J   | 3     | -                      | -    | 28   | 280   | 0.47 U   | 0.47 UJ  | 9.4 UJ   | 21 UJ   | 54 UJ   | 21 UJ   |   |
| N-Butylbenzene                              | µg/m <sup>3</sup> | 104-51-8   | 16 J    | -     | -                      | -    | -  | -   | 0.31 J   | 0.25 U   | 5.1 U  | 11 U  | 29 U  | 13 J  |   |
| N-Heptane                                   | µg/m <sup>3</sup> | 142-82-5   | 1100000 | 1390  | -                      | -    | -  | -   | 1.1 J  | 1.5 J  | 7.7 J  | 50 J  | 1800 <sup>a</sup>                               | 390   |   |
| N-Propylbenzene                             | µg/m <sup>3</sup> | 103-65-1   | 95 J    | 3480  | -                      | -    | -  | -   | 0.40 J   | 0.29 J   | 5.5 U  | 12 U  | 95 J  | 13 U  |   |
| o-Xylene                                    | µg/m <sup>3</sup> | 95-47-6    | 180000  | 348   | -                      | -    | -  | -   | 2.9  | 3.1  | 6.1 J  | 18 J  | 310   | 12 U  |   |
| Styrene                                     | µg/m <sup>3</sup> | 100-42-5   | 3.5     | 3480  | -                      | -    | -  | -   | 0.64 J   | 0.25 U   | 4.9 U  | 11 U  | 28 U  | 11 U  |   |
| tert-Butyl alcohol                          | µg/m <sup>3</sup> | 75-65-0    | 11 J    | -     | -                      | -    | -  | -   | 4.5 J  | 1.4 J  | 2.3 U  | 7.5 J   | 13 U  | 5.2 U   |   |
| tert-Butylbenzene                           | µg/m <sup>3</sup> | 98-06-6    | 5.7 J   | -     | -                      | -    | -  | -   | 0.36 U   | 0.36 U   | 7.2 U  | 16 U  | 41 U  | 16 U  |   |
| Tetrachloroethene                           | µg/m <sup>3</sup> | 127-18-4   | 550     | 139   | -                      | -    | 1400   | 4200  | 0.27 U   | 1.9  | 5.4 U  | 12 U  | 31 U  | 12 U  |   |
| Tetrahydrofuran                             | µg/m <sup>3</sup> | 109-99-9   | 4.7 J   | 6950  | -                      | -    | -  | -   | 2.3 J  | 0.19 U   | 3.7 U  | 8.3 U   | 21 U  | 8.5 U   |   |
| Toluene                                     | µg/m <sup>3</sup> | 108-88-3   | 1700000 | 17400 | -                      | -    | -  | -   | 4.3  | 8.0  | 15   | 34  | 540   | 25 J  |   |
| trans-1,2-Dichloroethene                    | µg/m <sup>3</sup> | 156-60-5   | 330     | -     | -                      | -    | -  | -   | 2.3  | 1.1  | 4.0 U  | 8.9 U   | 23 U  | 21 J  |   |
| trans-1,3-Dichloropropene                   | µg/m <sup>3</sup> | 10061-02-6 | ND      | -     | -                      | -    | -  | -   | 0.22 U   | 0.22 U   | 4.4 U  | 9.8 U   | 25 U  | 9.9 U   |   |
| Trichloroethene                             | µg/m <sup>3</sup> | 79-01-6    | 27000   | 7     | 70                     | 210  | -  | -   | 0.75 J   | 0.19 U   | 3.9 U  | 110 <sup>ab</sup>                               | 22 U  | 11 J <sup>a</sup>                               |   |
| Trichlorofluoromethane (CFC-11)             | µg/m <sup>3</sup> | 75-69-4    | 8.7     | -     | -                      | -    | -  | -   | 7.1  | 3.4  | 5.0 J  | 6.1 U   | 15 U  | 6.1 U   |   |
| Trifluorotrichloroethane (CFC-113)          | µg/m <sup>3</sup> | 76-13-1    | 6.6     | 17400 | -                      | -    | -  | -   | 0.66 J   | 0.59 J   | 4.8 U  | 11 U  | 27 U  | 11 U  |   |
| Vinyl bromide (Bromoethene)                 | µg/m <sup>3</sup> | 593-60-2   | ND      | 3     | -                      | -    | -  | -   | 0.15 U   | 0.15 U   | 3.1 U  | 6.9 U   | 17 U  | 7.0 U   |   |
| Vinyl chloride                              | µg/m <sup>3</sup> | 75-01-4    | 2500    | 6     | -                      | -    | 56   | 560   | 0.30 J   | 0.18 U   | 75 <sup>ad</sup>                                 | 77 <sup>ad</sup>                                | 21 U  | 160 <sup>ad</sup>                               |   |
| Xylenes (total)                             | µg/m <sup>3</sup> | 1330-20-7  | 770000  | 348   | -                      | -    | -  | -   | 115  | 12   | 19.1   | 72  | 660 <sup>a</sup>                                | 67  |   |
| Total VOCs                                  | µg/m <sup>3</sup> | -          | -       | -     | -                      | -    | -  | -   | 298.57   | 141.02   | 1166.1   | 3459.5  | 25557   | 7031  |   |

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UU - Not detected; associated reporting limit is estimated.

1 - USEPA sub slab or exterior soil gas concentration Vapor Intrusion Screening Levels (VISLs) based on cancer risk 1E 06 and hazard quotient (HQ)=0.1

2 - Ohio EPA accelerated and urgent response action levels and chronic response action level and removal management levels, from the Ohio EPA Guidance Document titled "Recommendations Regarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio", dated August 2016.

Table 4

**Analytical Results Summary and Residential Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayon Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date          | Parameters        | Units    | CAS#    | Max    | USEPA <sup>1</sup>     |                     | Ohio EPA <sup>2</sup>  |   |  | GP28-18<br>SVA-38443-081518-GL-008<br>8/15/2018 | GP29-18<br>SVA-38443-081518-GL-009<br>8/15/2018 | GP30-18<br>SVA-38443-082218-GL-027<br>8/22/2018 | GP31-18<br>SVA-38443-082218-GL-026<br>8/22/2018 | GP32-18<br>SVA-38443-082418-GL-035<br>8/24/2018 | GP33-18<br>SVA-38443-082318-GL-029<br>8/23/2018 |   |   |           |
|--|-------------------|----------|---------|--------|------------------------|---------------------|--|---|--|---|---|---|---|---|---|---|---|-----------|
|  |                   |          |         |        | Substab<br>Residential | VISL<br>Residential | Accelerated<br>Response<br>Action Level<br>Residential<br>(24 hours) | Urgent<br>Response<br>Action Level<br>Residential<br>(24 hours) | Chronic<br>Response<br>Action Level<br>Residential | Removal<br>Management Level<br>Residential      |   |   |   |   |   |   |   |           |
|  |                   |          |         |        |                        |                     |  |   |  |   |   |   | a   | b   | c   | d | e | Duplicate |
| <b>Volatiles</b>                                     |                   |          |         |        |                        |                     |  |   |  |   |   |   |   |   |   |   |   |           |
| 1,1,1-Trichloroethane                                | µg/m <sup>3</sup> | 71-55-6  | 33      | 17400  | -                      | -                   | -  | -   | 6.4 U  | 7.8 J   | 0.16 U  | 44 U  | 15  | 0.16 U  |   |   |   |           |
| 1,1,2,2-Tetrachloroethane                            | µg/m <sup>3</sup> | 79-34-5  | ND      | 2      | -                      | -                   | -  | -   | 16 U   | 8.4 U   | 0.42 U  | 110 U   | 4.2 U   | 0.42 U  |   |   |   |           |
| 1,1,2-Trichloroethane                                | µg/m <sup>3</sup> | 79-00-5  | ND      | 1      | -                      | -                   | -  | -   | 11 U   | 5.9 U   | 0.29 U  | 79 U  | 2.9 U   | 0.29 U  |   |   |   |           |
| 1,1-Dichloroethane                                   | µg/m <sup>3</sup> | 75-34-3  | 3200    | 59     | -                      | -                   | -  | -   | 20 J   | 4.7 J   | 0.11 U  | 28 U  | 1.5 J   | 0.11 U  |   |   |   |           |
| 1,1-Dichloroethene                                   | µg/m <sup>3</sup> | 75-35-4  | 24      | 695    | -                      | -                   | -  | -   | 5.2 U  | 2.7 U   | 0.13 U  | 36 U  | 1.3 U   | 0.13 U  |   |   |   |           |
| 1,2,4-Trichlorobenzene                               | µg/m <sup>3</sup> | 120-82-1 | ND      | 7      | -                      | -                   | -  | -   | 28 UJ  | 15 UJ   | 0.73 U  | 190 U   | 7.3 U   | 0.73 UJ   |   |   |   |           |
| 1,2,4-Trimethylbenzene                               | µg/m <sup>3</sup> | 95-63-6  | 8400 J  | 209    | -                      | -                   | -  | -   | 12 U   | 14 J  | 3.2   | 83 U  | 3.1 U   | 1.7   |   |   |   |           |
| 1,2-Dibromoethane (Ethylene dibromide)               | µg/m <sup>3</sup> | 106-93-4 | ND      | 0      | -                      | -                   | -  | -   | 13 U   | 6.8 U   | 0.34 U  | 91 U  | 3.4 U   | 0.34 U  |   |   |   |           |
| 1,2-Dichlorobenzene                                  | µg/m <sup>3</sup> | 95-50-1  | ND      | 695    | -                      | -                   | -  | -   | 16 U   | 8.4 U   | 0.42 U  | 110 U   | 4.2 U   | 0.42 U  |   |   |   |           |
| 1,2-Dichloroethane                                   | µg/m <sup>3</sup> | 107-06-2 | 1       | 4      | -                      | -                   | -  | -   | 7.4 U  | 3.8 U   | 0.19 U  | 51 U  | 1.9 U   | 0.19 U  |   |   |   |           |
| 1,2-Dichloropropane                                  | µg/m <sup>3</sup> | 78-87-5  | ND      | 14     | -                      | -                   | -  | -   | 9.3 U  | 4.8 U   | 0.24 U  | 64 U  | 2.4 U   | 0.24 U  |   |   |   |           |
| 1,2-Dichlortetrafluoroethane (CFC 114)               | µg/m <sup>3</sup> | 76-14-2  | 310     | -      | -                      | -                   | -  | -   | 8.7 U  | 92  | 0.22 U  | 60 U  | 11 J  | 0.22 U  |   |   |   |           |
| 1,3,5-Trimethylbenzene                               | µg/m <sup>3</sup> | 108-67-8 | 52 J    | 209    | -                      | -                   | -  | -   | 12 U   | 7.6 J   | 0.85 J  | 86 U  | 3.2 U   | 0.37 J  |   |   |   |           |
| 1,3-Butadiene  | µg/m <sup>3</sup> | 106-99-0 | ND      | 3      | -                      | -                   | -  | -   | 5.5 U  | 2.8 U   | 0.14 U  | 38 U  | 1.4 U   | 0.14 U  |   |   |   |           |
| 1,3-Dichlorobenzene                                  | µg/m <sup>3</sup> | 541-73-1 | 6.9     | -      | -                      | -                   | -  | -   | 15 U   | 7.8 U   | 6.9   | 100 U   | 3.9 U   | 2.0   |   |   |   |           |
| 1,3-Dichloropropene                                  | µg/m <sup>3</sup> | 542-75-6 | ND      | 23     | -                      | -                   | -  | -   | ND   | ND  | ND  | ND  | ND  | ND  |   |   |   |           |
| 1,4-Dichlorobenzene                                  | µg/m <sup>3</sup> | 106-46-7 | 74 J    | 9      | -                      | -                   | -  | -   | 15 U   | 7.7 U   | 0.38 U  | 100 U   | 3.8 U   | 0.38 U  |   |   |   |           |
| 1,4-Dioxane  | µg/m <sup>3</sup> | 123-91-1 | 0.73 J  | 19     | -                      | -                   | -  | -   | 11 U   | 5.8 U   | 0.43 J  | 77 U  | 2.9 U   | 0.29 U  |   |   |   |           |
| 2,2,4-Trimethylpentane                               | µg/m <sup>3</sup> | 540-84-1 | 1800000 | -      | -                      | -                   | -  | -   | 7.1 U  | 3.6 U   | 0.90 J  | 49 U  | 1.8 U   | 1.9 J   |   |   |   |           |
| 2-Butanone (Methyl ethyl ketone) (MEK)               | µg/m <sup>3</sup> | 78-93-3  | 35 J    | 17400  | -                      | -                   | -  | -   | 23 U   | 12 U  | 12  | 160 U   | 5.9 U   | 5.4   |   |   |   |           |
| 2-Chlorotoluene                                      | µg/m <sup>3</sup> | 95-49-8  | 1.5 J   | -      | -                      | -                   | -  | -   | 13 U   | 6.5 U   | 0.33 U  | 87 U  | 3.3 U   | 0.33 U  |   |   |   |           |
| 2-Hexanone   | µg/m <sup>3</sup> | 591-78-6 | 8.9 J   | 104    | -                      | -                   | -  | -   | 9.2 U  | 4.8 U   | 1.7 J   | 64 U  | 2.4 U   | 0.91 J  |   |   |   |           |
| 2-Phenylbutane (sec-Butylbenzene)                    | µg/m <sup>3</sup> | 135-98-8 | 47 J    | -      | -                      | -                   | -  | -   | 47 J   | 30 J  | 0.35 U  | 94 U  | 3.5 U   | 0.35 U  |   |   |   |           |
| 4-Ethyl toluene                                      | µg/m <sup>3</sup> | 622-96-8 | 72 J    | -      | -                      | -                   | -  | -   | 13 U   | 11 J  | 0.75 J  | 87 U  | 3.2 U   | 0.39 J  |   |   |   |           |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/m <sup>3</sup> | 108-10-1 | 4.3     | 10400  | -                      | -                   | -  | -   | 31 U   | 16 U  | 1.1 J   | 210 U   | 8.0 U   | 1.0 J   |   |   |   |           |
| Acetone  | µg/m <sup>3</sup> | 67-64-1  | 460     | 107000 | -                      | -                   | -  | -   | 130 U  | 67 U  | 120   | 890 U   | 37 J  | 28  |   |   |   |           |
| Allyl chloride                                       | µg/m <sup>3</sup> | 107-05-1 | ND      | 3      | -                      | -                   | -  | -   | 5.8 U  | 3.0 U   | 0.15 U  | 40 U  | 1.5 U   | 0.15 U  |   |   |   |           |
| Benzene  | µg/m <sup>3</sup> | 71-43-2  | 110000  | 12     | -                      | -                   | -  | -   | 120 <sup>a</sup>                                   | 40 <sup>a</sup>                                 | 1.5   | 48 U  | 3.6 J   | 0.67  |   |   |   |           |
| Benzyl chloride                                      | µg/m <sup>3</sup> | 100-44-7 | ND      | 2      | -                      | -                   | -  | -   | 16 U   | 8.1 U   | 0.40 U  | 110 U   | 4.0 U   | 0.40 U  |   |   |   |           |
| Bromodichloromethane                                 | µg/m <sup>3</sup> | 75-27-4  | ND      | 3      | -                      | -                   | -  | -   | 11 U   | 5.9 U   | 0.29 U  | 79 U  | 2.9 U   | 0.29 U  |   |   |   |           |
| Bromoform  | µg/m <sup>3</sup> | 75-25-2  | ND      | 85     | -                      | -                   | -  | -   | 19 U   | 9.9 U   | 0.50 U  | 130 U   | 5.0 U   | 0.50 U  |   |   |   |           |
| Bromomethane (Methyl bromide)                        | µg/m <sup>3</sup> | 74-83-9  | 0.98 J  | 17     | -                      | -                   | -  | -   | 4.8 U  | 2.5 U   | 0.12 U  | 33 U  | 1.2 U   | 0.12 U  |   |   |   |           |
| Butane   | µg/m <sup>3</sup> | 106-97-8 | 8100    | -      | -                      | -                   | -  | -   | 3700   | 4800  | 1.4   | 46 U  | 5.1 J   | 1.5   |   |   |   |           |
| Carbon disulfide                                     | µg/m <sup>3</sup> | 75-15-0  | 270 J   | 2430   | -                      | -                   | -  | -   | 38 J   | 17 J  | 65  | 270 J   | 69  | 1.6   |   |   |   |           |
| Carbon tetrachloride                                 | µg/m <sup>3</sup> | 56-23-5  | 36      | 16     | -                      | -                   | 160  | 1600  | 9.3 U  | 4.8 U   | 0.27 J  | 64 U  | 2.4 U   | 0.39 J  |   |   |   |           |
| Chlorobenzene  | µg/m <sup>3</sup> | 108-90-7 | 110000  | 174    | -                      | -                   | -  | -   | 2200 <sup>a</sup>                                  | 4.5 U   | 0.23 U  | 60 U  | 2.3 U   | 0.23 U  |   |   |   |           |
| Chlorodifluoromethane                                | µg/m <sup>3</sup> | 75-45-6  | 580     | 174000 | -                      | -                   | -  | -   | 17 J   | 14 J  | 3.0   | 35 U  | 4.7 J   | 7.8   |   |   |   |           |
| Chloroethane   | µg/m <sup>3</sup> | 75-00-3  | 550     | 34800  | -                      | -                   | -  | -   | 44   | 3.8 J   | 0.27 J  | 25 U  | 0.92 U  | 0.092 U   |   |   |   |           |
| Chloroform (Trichloromethane)                        | µg/m <sup>3</sup> | 67-66-3  | 110 J   | 4      | -                      | -                   | 41   | 410   | 7.2 U  | 3.7 U   | 0.19 U  | 110 J <sup>ad</sup>                             | 8.0 J <sup>a</sup>                              | 0.96  |   |   |   |           |
| Chloromethane (Methyl chloride)                      | µg/m <sup>3</sup> | 74-87-3  | 3.5     | 313    | -                      | -                   | -  | -   | 13 U   | 6.6 U   | 3.5   | 89 U  | 3.3 U   | 0.89 J  |   |   |   |           |
| cis-1,2-Dichloroethene                               | µg/m <sup>3</sup> | 156-59-2 | 1700    | -      | -                      | -                   | -  | -   | 34   | 95  | 0.24 U  | 1000  | 4.7 J   |   |   |   |   |           |

Table 4

**Analytical Results Summary and Residential Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date | Parameters        | Units      | CAS#    | Max   | USEPA <sup>1</sup>     |      | Ohio EPA <sup>2</sup>  |   |  | GP28-18<br>SVA-38443-081518-GL-008<br>8/15/2018 | GP29-18<br>SVA-38443-081518-GL-009<br>8/15/2018 | GP30-18<br>SVA-38443-082218-GL-027<br>8/22/2018 | GP31-18<br>SVA-38443-082218-GL-026<br>8/22/2018 | GP32-18<br>SVA-38443-082418-GL-035<br>8/24/2018 | GP33-18<br>SVA-38443-082318-GL-029<br>8/23/2018 |
|---|-------------------|------------|---------|-------|------------------------|------|--|---|--|---|---|---|---|---|---|
|   |                   |            |         |       | Subslab<br>Residential | VISL | Accelerated<br>Response<br>Action Level<br>Residential<br>(24 hours) | Urgent<br>Response<br>Action Level<br>Residential<br>(24 hours) | Chronic<br>Response<br>Action Level<br>Residential | Removal<br>Management Level<br>Residential      |   |   |   |   |   |
|   |                   |            |         |       | a                      | b    | c  | d   | e  | Duplicate                                       |   |   |   |   |   |
| Isopropyl alcohol                           | µg/m <sup>3</sup> | 67-63-0    | 160     | 695   | -                      | -    | -  | -   | 9 0 U  | 5.1 J   | 90  | 120 J   | 46 J  | 27  |   |
| Isopropyl benzene                           | µg/m <sup>3</sup> | 98-82-8    | 9800 J  | 1390  | -                      | -    | -  | -   | 92   | 74  | 23  | 79 U  | 2.9 U   | 0.81 J  |   |
| m&p-Xylenes                                 | µg/m <sup>3</sup> | M/P-XYLENE | 590000  | -     | -                      | -    | -  | -   | 92   | 15 J  | 11  | 140 U   | 5.2 U   | 4.9   |   |
| Methyl methacrylate                         | µg/m <sup>3</sup> | 80-62-6    | 1.4 J   | 2430  | -                      | -    | -  | -   | 13 U   | 6.5 U   | 0.32 U  | 87 U  | 3.2 U   | 0.32 U  |   |
| Methyl tert butyl ether (MTBE)              | µg/m <sup>3</sup> | 1634-04-4  | ND      | 360   | -                      | -    | -  | -   | 24 U   | 12 U  | 0.61 U  | 160 U   | 6.1 U   | 0.61 U  |   |
| Methylene chloride                          | µg/m <sup>3</sup> | 75-09-2    | 40      | 2090  | -                      | -    | -  | -   | 43 U   | 22 U  | 1.6 J   | 300 U   | 11 U  | 3.0   |   |
| Naphthalene                                 | µg/m <sup>3</sup> | 91-20-3    | 1.5 J   | 3     | -                      | -    | 28   | 280   | 18 UJ  | 9.4 UJ  | 0.47 U  | 130 U   | 4.7 U   | 0.47 UJ   |   |
| N-Butylbenzene                              | µg/m <sup>3</sup> | 104-51-8   | 16 J    | -     | -                      | -    | -  | -   | 16 J   | 12 J  | 0.39 J  | 68 U  | 2.5 U   | 0.25 U  |   |
| N-Heptane                                   | µg/m <sup>3</sup> | 142-82-5   | 1100000 | 1390  | -                      | -    | -  | -   | 520  | 400   | 1.6 J   | 52 U  | 1.9 U   | 0.93 J  |   |
| N-Propylbenzene                             | µg/m <sup>3</sup> | 103-65-1   | 95 J    | 3480  | -                      | -    | -  | -   | 11 U   | 66  | 0.50 J  | 74 U  | 2.8 U   | 0.28 U  |   |
| o-Xylene                                    | µg/m <sup>3</sup> | 95-47-6    | 180000  | 348   | -                      | -    | -  | -   | 15 J   | 13 J  | 4.1   | 71 U  | 2.6 U   | 1.7   |   |
| Styrene                                     | µg/m <sup>3</sup> | 100-42-5   | 3.5     | 3480  | -                      | -    | -  | -   | 9 6 U  | 4.9 U   | 0.94  | 66 U  | 2.5 U   | 0.32 J  |   |
| tert-Butyl alcohol                          | µg/m <sup>3</sup> | 75-65-0    | 11 J    | -     | -                      | -    | -  | -   | 4 5 U  | 3 6 J   | 4.3 J   | 31 U  | 6.0 J   | 2.2 J   |   |
| tert-Butylbenzene                           | µg/m <sup>3</sup> | 98-06-6    | 5.7 J   | -     | -                      | -    | -  | -   | 14 U   | 7.2 U   | 0.36 U  | 97 U  | 3.6 U   | 0.36 U  |   |
| Tetrachloroethene                           | µg/m <sup>3</sup> | 127-18-4   | 550     | 139   | -                      | -    | 1400   | 4200  | 11 U   | 68  | 0.27 U  | 73 U  | 2.7 U   | 2.2   |   |
| Tetrahydrofuran                             | µg/m <sup>3</sup> | 109-99-9   | 4.7 J   | 6950  | -                      | -    | -  | -   | 7 2 U  | 3.7 U   | 2.7 J   | 50 U  | 3.0 J   | 0.96 J  |   |
| Toluene                                     | µg/m <sup>3</sup> | 108-88-3   | 1700000 | 17400 | -                      | -    | -  | -   | 31   | 23  | 7 2   | 120 U   | 4.5 U   | 2.8   |   |
| trans-1,2-Dichloroethene                    | µg/m <sup>3</sup> | 156-60-5   | 330     | -     | -                      | -    | -  | -   | 28 J   | 5.8 J   | 4.1   | 330   | 2.9 J   | 2.6   |   |
| trans-1,3-Dichloropropene                   | µg/m <sup>3</sup> | 10061-02-6 | ND      | -     | -                      | -    | -  | -   | 8 5 U  | 4.4 U   | 0.22 U  | 58 U  | 2.2 U   | 0.22 U  |   |
| Trichloroethene                             | µg/m <sup>3</sup> | 79-01-6    | 27000   | 7     | 70                     | 210  | -  | -   | 7 5 U  | 17 J <sup>a</sup>                               | 2.1   | 27000 <sup>abc</sup>                            | 590 <sup>abc</sup>                              | 15 <sup>a</sup>                                 |   |
| Trichlorofluoromethane (CFC-11)             | µg/m <sup>3</sup> | 75-69-4    | 8.7     | -     | -                      | -    | -  | -   | 5 2 U  | 2.7 U   | 0.56 J  | 36 U  | 3.1 J   | 1.1   |   |
| Trifluorotrichloroethane (CFC-113)          | µg/m <sup>3</sup> | 76-13-1    | 6.6     | 17400 | -                      | -    | -  | -   | 9 2 U  | 4.8 U   | 0.24 U  | 64 U  | 2.4 U   | 0.45 J  |   |
| Vinyl bromide (Bromoethene)                 | µg/m <sup>3</sup> | 593-60-2   | ND      | 3     | -                      | -    | -  | -   | 5 9 U  | 3.1 U   | 0.15 U  | 41 U  | 1.5 U   | 0.15 U  |   |
| Vinyl chloride                              | µg/m <sup>3</sup> | 75-01-4    | 2500    | 6     | -                      | -    | 56   | 560   | 200 <sup>ad</sup>                                  | 53 <sup>a</sup>                                 | 0.18 U  | 49 U  | 1.8 U   | 0.18 U  |   |
| Xylenes (total)                             | µg/m <sup>3</sup> | 1330-20-7  | 770000  | 348   | -                      | -    | -  | -   | 107  | 28  | 15.1  | ND  | ND  | 6.6   |   |
| Total VOCs                                  | µg/m <sup>3</sup> | -          | -       | -     | -                      | -    | -  | -   | 8944   | 6811.4  | 375.52  | 28830   | 841.7   | 131.45  |   |

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UU - Not detected; associated reporting limit is estimated.

1 - USEPA sub slab or exterior soil gas concentration Vapor Intrusion Screening Levels (VISLs) based on cancer risk 1E 06 and hazard quotient (HQ)=0.1

2 - Ohio EPA accelerated and urgent response action levels and chronic response action level and removal management levels, from the Ohio EPA Guidance Document titled "Recommendations Regarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio", dated August 2016.

Table 4

**Analytical Results Summary and Residential Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayon Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date          | Parameters        | Units      | CAS#    | Max    | USEPA <sup>1</sup><br>Subslab VSL<br>Residential | Accelerated<br>Response<br>Action Level<br>Residential<br>(24 hours) | Ohio EPA <sup>2</sup><br>Urgent<br>Response<br>Action Level<br>Residential<br>(24 hours) | Chronic<br>Response<br>Action Level<br>Residential | Removal<br>Management Level<br>Residential | GP34-18<br>SVA-38443-082218-GL-022<br>8/22/2018 |
|--|-------------------|------------|---------|--------|--|--|--|--|--|---|
| <b>Volatiles</b>                                     |                   |            |         |        |  |  |  |  |  |   |
| 1,1,1-Trichloroethane                                | µg/m <sup>3</sup> | 71-55-6    | 33      | 17400  | -  | -  | -  | -  | -  | 1.8   |
| 1,1,2,2-Tetrachloroethane                            | µg/m <sup>3</sup> | 79-34-5    | ND      | 2      | -  | -  | -  | -  | -  | 0.42 U  |
| 1,1,2-Trichloroethane                                | µg/m <sup>3</sup> | 79-00-5    | ND      | 1      | -  | -  | -  | -  | -  | 0.29 U  |
| 1,1-Dichloroethane                                   | µg/m <sup>3</sup> | 75-34-3    | 3200    | 59     | -  | -  | -  | -  | -  | 0.11 U  |
| 1,1-Dichloroethene                                   | µg/m <sup>3</sup> | 75-35-4    | 24      | 695    | -  | -  | -  | -  | -  | 0.13 U  |
| 1,2,4-Trichlorobenzene                               | µg/m <sup>3</sup> | 120-82-1   | ND      | 7      | -  | -  | -  | -  | -  | 0.73 UJ   |
| 1,2,4-Trimethylbenzene                               | µg/m <sup>3</sup> | 95-63-6    | 8400 J  | 209    | -  | -  | -  | -  | -  | 1.8   |
| 1,2-Dibromoethane (Ethylene dibromide)               | µg/m <sup>3</sup> | 106-93-4   | ND      | 0      | -  | -  | -  | -  | -  | 0.34 U  |
| 1,2-Dichlorobenzene                                  | µg/m <sup>3</sup> | 95-50-1    | ND      | 695    | -  | -  | -  | -  | -  | 0.42 U  |
| 1,2-Dichloroethane                                   | µg/m <sup>3</sup> | 107-06-2   | 1       | 4      | -  | -  | -  | -  | -  | 0.19 U  |
| 1,2-Dichloropropane                                  | µg/m <sup>3</sup> | 78-87-5    | ND      | 14     | -  | -  | -  | -  | -  | 0.24 U  |
| 1,2-Dichlortetrafluoroethane (CFC 114)               | µg/m <sup>3</sup> | 76-14-2    | 310     | -      | -  | -  | -  | -  | -  | 0.22 U  |
| 1,3,5-Trimethylbenzene                               | µg/m <sup>3</sup> | 108-67-8   | 52 J    | 209    | -  | -  | -  | -  | -  | 0.39 J  |
| 1,3-Butadiene  | µg/m <sup>3</sup> | 106-99-0   | ND      | 3      | -  | -  | -  | -  | -  | 0.14 U  |
| 1,3-Dichlorobenzene                                  | µg/m <sup>3</sup> | 541-73-1   | 6.9     | -      | -  | -  | -  | -  | -  | 2.3   |
| 1,3-Dichloropropene                                  | µg/m <sup>3</sup> | 542-75-6   | ND      | 23     | -  | -  | -  | -  | -  | ND  |
| 1,4-Dichlorobenzene                                  | µg/m <sup>3</sup> | 106-46-7   | 74 J    | 9      | -  | -  | -  | -  | -  | 0.38 U  |
| 1,4-Dioxane  | µg/m <sup>3</sup> | 123-91-1   | 0.73 J  | 19     | -  | -  | -  | -  | -  | 0.29 U  |
| 2,2,4-Trimethylpentane                               | µg/m <sup>3</sup> | 540-84-1   | 1800000 | -      | -  | -  | -  | -  | -  | 0.88 J  |
| 2-Butanone (Methyl ethyl ketone) (MEK)               | µg/m <sup>3</sup> | 78-93-3    | 35 J    | 17400  | -  | -  | -  | -  | -  | 7.8   |
| 2-Chlorotoluene                                      | µg/m <sup>3</sup> | 95-49-8    | 1.5 J   | -      | -  | -  | -  | -  | -  | 0.33 U  |
| 2-Hexanone   | µg/m <sup>3</sup> | 591-78-6   | 8.9 J   | 104    | -  | -  | -  | -  | -  | 1.3 J   |
| 2-Phenylbutane (sec-Butylbenzene)                    | µg/m <sup>3</sup> | 135-98-8   | 47 J    | -      | -  | -  | -  | -  | -  | 0.35 U  |
| 4-Ethyl toluene                                      | µg/m <sup>3</sup> | 622-96-8   | 72 J    | -      | -  | -  | -  | -  | -  | 0.46 J  |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK) | µg/m <sup>3</sup> | 108-10-1   | 4.3     | 10400  | -  | -  | -  | -  | -  | 0.90 J  |
| Acetone  | µg/m <sup>3</sup> | 67-64-1    | 460     | 107000 | -  | -  | -  | -  | -  | 35  |
| Allyl chloride                                       | µg/m <sup>3</sup> | 107-05-1   | ND      | 3      | -  | -  | -  | -  | -  | 0.15 U  |
| Benzene  | µg/m <sup>3</sup> | 71-43-2    | 110000  | 12     | -  | -  | -  | -  | -  | 0.81  |
| Benzyl chloride                                      | µg/m <sup>3</sup> | 100-44-7   | ND      | 2      | -  | -  | -  | -  | -  | 0.40 U  |
| Bromodichloromethane                                 | µg/m <sup>3</sup> | 75-27-4    | ND      | 3      | -  | -  | -  | -  | -  | 0.29 U  |
| Bromoform  | µg/m <sup>3</sup> | 75-25-2    | ND      | 85     | -  | -  | -  | -  | -  | 0.50 U  |
| Bromomethane (Methyl bromide)                        | µg/m <sup>3</sup> | 74-83-9    | 0.98 J  | 17     | -  | -  | -  | -  | -  | 0.12 U  |
| Butane   | µg/m <sup>3</sup> | 106-97-8   | 8100    | -      | -  | -  | -  | -  | -  | 0.82 J  |
| Carbon disulfide                                     | µg/m <sup>3</sup> | 75-15-0    | 270 J   | 2430   | -  | -  | -  | -  | -  | 21  |
| Carbon tetrachloride                                 | µg/m <sup>3</sup> | 56-23-5    | 36      | 16     | -  | -  | 160  | 1600   | 1600                                       | 0.24 U  |
| Chlorobenzene  | µg/m <sup>3</sup> | 108-90-7   | 110000  | 174    | -  | -  | -  | -  | -  | 0.23 U  |
| Chlorodifluoromethane                                | µg/m <sup>3</sup> | 75-45-6    | 580     | 174000 | -  | -  | -  | -  | -  | 4.6   |
| Chloroethane   | µg/m <sup>3</sup> | 75-00-3    | 550     | 34800  | -  | -  | -  | -  | -  | 0.092 U   |
| Chloroform (Trichloromethane)                        | µg/m <sup>3</sup> | 67-66-3    | 110 J   | 4      | -  | -  | 41   | 410  | 410  | 0.24 J  |
| Chloromethane (Methyl chloride)                      | µg/m <sup>3</sup> | 74-87-3    | 3.5     | 313    | -  | -  | -  | -  | -  | 1.5   |
| cis-1,2-Dichloroethene                               | µg/m <sup>3</sup> | 156-59-2   | 1700    | -      | -  | -  | -  | -  | -  | 0.24 U  |
| cis-1,3-Dichloropropene                              | µg/m <sup>3</sup> | 10061-01-5 | ND      | -      | -  | -  | -  | -  | -  | 0.34 U  |
| Cyclohexane  | µg/m <sup>3</sup> | 110-82-7   | 230000  | 20900  | -  | -  | -  | -  | -  | 0.20 J  |
| Cymene (p-Isopropyltoluene)                          | µg/m <sup>3</sup> | 99-87-6    | 0.46 J  | -      | -  | -  | -  | -  | -  | 0.31 U  |
| Dibromochloromethane                                 | µg/m <sup>3</sup> | 124-48-1   | ND      | -      | -  | -  | -  | -  | -  | 0.36 U  |
| Dichlorodifluoromethane (CFC-12)                     | µg/m <sup>3</sup> | 75-71-8    | 570     | 348    | -  | -  | -  | -  | -  | 1.8   |
| Ethylbenzene   | µg/m <sup>3</sup> | 100-41-4   | 140000  | 37     | -  | -  | -  | -  | -  | 1.6   |
| Hexachlorobutadiene                                  | µg/m <sup>3</sup> | 87-68-3    | ND      | 4      | -  | -  | -  | -  | -  | 0.83 UJ   |
| Hexane   | µg/m <sup>3</sup> | 110-54-3   | 630000  | 2430   | -  | -  | -  | -  | -  | 0.93 J  |

Table 4

**Analytical Results Summary and Residential Guidance Criteria**  
**Soil Gas Sampling - August 2018**  
**South Dayton Dump and Landfill Site**  
**Moraine, Ohio**

| Sample Location<br>Sample ID<br>Sample Date | GP34-18<br>SVA-38443-082218-GL-022<br>8/22/2018 |            |         |   |  |  |  |  |
|---|---|------------|---------|---|--|--|--|--|
| Parameters                                  | Units   | CAS#       | Max     | USEPA <sup>1</sup><br>Subslab VISL<br>Residential | Accelerated<br>Response<br>Action Level<br>Residential<br>(24 hours) | Ohio EPA <sup>2</sup><br>Urgent<br>Response<br>Action Level<br>Residential<br>(24 hours) | Chronic<br>Response<br>Action Level<br>Residential | Removal<br>Management Level<br>Residential |
| Isopropyl alcohol                           | µg/m <sup>3</sup>                               | 67-63-0    | 160     | 695   | -  | -  | -  | -  |
| Isopropyl benzene                           | µg/m <sup>3</sup>                               | 98-82-8    | 9800 J  | 1390  | -  | -  | -  | -  |
| m&p-Xylenes                                 | µg/m <sup>3</sup>                               | M/P-XYLENE | 590000  | -   | -  | -  | -  | -  |
| Methyl methacrylate                         | µg/m <sup>3</sup>                               | 80-62-6    | 1.4 J   | 2430  | -  | -  | -  | -  |
| Methyl tert butyl ether (MTBE)              | µg/m <sup>3</sup>                               | 1634-04-4  | ND      | 360   | -  | -  | -  | -  |
| Methylene chloride                          | µg/m <sup>3</sup>                               | 75-09-2    | 40      | 2090  | -  | -  | -  | -  |
| Naphthalene                                 | µg/m <sup>3</sup>                               | 91-20-3    | 1.5 J   | 3   | -  | -  | 28   | 280  |
| N-Butylbenzene                              | µg/m <sup>3</sup>                               | 104-51-8   | 16 J    | -   | -  | -  | -  | -  |
| N-Heptane                                   | µg/m <sup>3</sup>                               | 142-82-5   | 1100000 | 1390  | -  | -  | -  | -  |
| N-Propylbenzene                             | µg/m <sup>3</sup>                               | 103-65-1   | 95 J    | 3480  | -  | -  | -  | -  |
| o-Xylene                                    | µg/m <sup>3</sup>                               | 95-47-6    | 180000  | 348   | -  | -  | -  | -  |
| Styrene                                     | µg/m <sup>3</sup>                               | 100-42-5   | 3.5     | 3480  | -  | -  | -  | -  |
| tert-Butyl alcohol                          | µg/m <sup>3</sup>                               | 75-65-0    | 11 J    | -   | -  | -  | -  | -  |
| tert-Butylbenzene                           | µg/m <sup>3</sup>                               | 98-06-6    | 5.7 J   | -   | -  | -  | -  | -  |
| Tetrachloroethene                           | µg/m <sup>3</sup>                               | 127-18-4   | 550     | 139   | -  | -  | 1400   | 4200                                       |
| Tetrahydrofuran                             | µg/m <sup>3</sup>                               | 109-99-9   | 4.7 J   | 6950  | -  | -  | -  | -  |
| Toluene                                     | µg/m <sup>3</sup>                               | 108-88-3   | 1700000 | 17400   | -  | -  | -  | -  |
| trans-1,2-Dichloroethene                    | µg/m <sup>3</sup>                               | 156-60-5   | 330     | -   | -  | -  | -  | -  |
| trans-1,3-Dichloropropene                   | µg/m <sup>3</sup>                               | 10061-02-6 | ND      | -   | -  | -  | -  | -  |
| Trichloroethene                             | µg/m <sup>3</sup>                               | 79-01-6    | 27000   | 7   | 70   | 210  | -  | -  |
| Trichlorofluoromethane (CFC-11)             | µg/m <sup>3</sup>                               | 75-69-4    | 8.7     | -   | -  | -  | -  | -  |
| Trifluorotrichloroethane (CFC-113)          | µg/m <sup>3</sup>                               | 76-13-1    | 6.6     | 17400   | -  | -  | -  | -  |
| Vinyl bromide (Bromoethene)                 | µg/m <sup>3</sup>                               | 593-60-2   | ND      | 3   | -  | -  | -  | -  |
| Vinyl chloride                              | µg/m <sup>3</sup>                               | 75-01-4    | 2500    | 6   | -  | -  | 56   | 560  |
| Xylenes (total)                             | µg/m <sup>3</sup>                               | 1330-20-7  | 770000  | 348   | -  | -  | -  | -  |
| Total VOCs                                  | µg/m <sup>3</sup>                               | -          | -       | -   | -  | -  | -  | 233.08                                     |

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UU - Not detected; associated reporting limit is estimated.

1 - USEPA sub slab or exterior soil gas concentration Vapor Intrusion Screening Levels (VISLs) based on cancer risk 1E 06 and hazard quotient (HQ)=0.1

2 - Ohio EPA accelerated and urgent response action levels and chronic response action level and removal management levels, from the Ohio EPA Guidance Document titled "Recommendations Regarding Response Action Levels and Timelines for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio", dated August 2016.

## Attachment 1



## STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443  
CLIENT: PRP GROUP  
LOCATION: MORAINE, OHIO

HOLE DESIGNATION: GP-01-18  
DATE COMPLETED: 25 January 2018  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE/A. FEL

| DEPTH<br>ft BGS                                   | STRATIGRAPHIC DESCRIPTION & REMARKS  | DEPTH<br>ft BGS   | GAS PROBE | SAMPLE |          |         |         |
|---|--|-------------------|-----------|--------|----------|---------|---------|
|   |  |                   |           | NUMBER | INTERVAL | REC (%) | N VALUE |
|   |  |                   |           |        |          |         |         |
| 2   | CONCRETE SLAB<br><br>SW-GRAVELLY SAND (FILL), fine gravel, medium to coarse grained, slightly consolidated, well graded, dark brown, dry<br><br>- 0.3' light brown at 3.3ft BGS<br>- glass pieces at 3.9ft BGS<br>- red clay brick at 4.1ft BGS<br>- broken rock at 4.3ft BGS<br>- increase in fine grained at 4.8ft BGS<br>- red clay brick at 5.5ft BGS                                  | 0.50              |           | 1DP    |          | 100     | 0 / 0   |
| 4   |  | 6.00              |           | 2DP    |          | 74      | 2.3     |
| 6   | CL-SANDY CLAY (FILL), with fine gravel, coarse sand, slightly cohesive, low plasticity, light brown, moist<br><br>- large glass pieces at 6.4ft BGS<br>- 0.5' book pages at 7.0ft BGS<br>- with fine gravel, medium grained, black at 8.0ft BGS<br>- glass, metal pieces and concrete piece at 9.0ft BGS<br>- wood chips and glass at 9.8ft BGS<br>- red clay brick staining at 10.0ft BGS | 10.00             |           | 3DP    |          | 62      | 0 / 0   |
| 8   |  | 13.30             |           | 4DP    |          | 82      | 0 / 0   |
| 10  |  | 16.00             |           |        |          |         |         |
| 12  | SW-SAND (FILL), with fine gravel, loose, medium to coarse grained, well graded, light gray, dry<br><br>- light brown staining at 12.0ft BGS<br>- slag piece at 12.9ft BGS<br>- crushed rock fragment at 13.0ft BGS   | 20.00             |           |        |          |         |         |
| 14  |  |                   |           |        |          |         |         |
| 16  | ML-CLAYEY SILT (FILL), with medium to coarse sand, slightly cohesive, low plasticity, dark gray, moist<br><br>- light brown rock fragments at 13.8ft BGS<br>- glass chunks at 15.0ft BGS<br>- asphalt at 15.5ft BGS  |                   |           |        |          |         |         |
| 18  |  |                   |           |        |          |         |         |
| 20  | GW-SANDY GRAVEL (native), loose, fine grained, trace coarse grained, well graded, light brown, dry<br><br>- crushed rock fragment at 17.0ft BGS<br>- crushed white quartz fragment at 17.5ft BGS<br>- crushed rock fragment at 19.5ft BGS<br>- crushed rock fragment at 19.8ft BGS   |                   |           |        |          |         |         |
| 22  | END OF BOREHOLE @ 20.0ft BGS   |                   |           |        |          |         |         |
| 24  |  |                   |           |        |          |         |         |
| 26  |  |                   |           |        |          |         |         |
| 28  |  |                   |           |        |          |         |         |
| OVERBURDEN LOG 038443-50-AWI-GPJ GHD Corp 24/7/18 | NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE   | CHEMICAL ANALYSIS |           |        |          |         |         |



# STRATIGRAPHIC LOG (OVERBURDEN)

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PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443  
CLIENT: PRP GROUP  
LOCATION: MORaine, OHIO

HOLE DESIGNATION: GP-03-18  
DATE COMPLETED: 30 January 2018  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE/A. FELDMAN

| DEPTH<br>ft BGS  | STRATIGRAPHIC DESCRIPTION & REMARKS  | DEPTH<br>ft BGS | SAMPLE |          |         |           |
|--|--|-----------------|--------|----------|---------|-----------|
|  |  |                 | NUMBER | INTERVAL | REC (%) | 'N' VALUE |
| 2  | SW-SAND (FILL), with silt and fine gravel, loose, medium to coarse grained, well graded, brown, moist<br>- 0.2' concrete pieces at 1.0ft BGS<br>- 0.1' concrete pieces at 2.0ft BGS          | 4.00            | 1DP    | 50       |         | 0 / 0     |
| 4  | ML-CLAYEY SILT (FILL), with fine to medium sand, slightly cohesive, low plasticity, dark gray, wet   | 5.00            |        |          |         |           |
| 6  | CONCRETE, dry  | 6.00            |        |          |         |           |
| 8  | SM-SILTY SAND (FILL), with fine gravel, loose, medium to coarse grained, well graded, brown, dry<br>- wet at 6.7ft BGS<br>- 0.3' dry foundry sand at 8.6ft BGS<br>- light brown at 9.0ft BGS | 10.00           | 2DP    | 100      |         | 0 / 0     |
| 10   | NO RECOVERY, sample blinded  | 13.60           | 3DP    | 28       |         | 0 / 0     |
| 14   | SM-SILTY SAND (FILL), foundry sand, with fine gravel, loose, medium to coarse grained, well graded, brown, wet   | 15.00           |        |          |         | 0.1       |
| 16   | NO RECOVERY, very soft material  | 20.00           | 4DP    | 0        |         | 0 / 0     |
| 20   | END OF BOREHOLE @ 20.0ft BGS   |                 |        |          |         |           |
| 22   |  |                 |        |          |         |           |
| 24   |  |                 |        |          |         |           |
| 26   |  |                 |        |          |         |           |
| 28   |  |                 |        |          |         |           |
| NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE |  |                 |        |          |         |           |





## STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443  
CLIENT: PRP GROUP  
LOCATION: MORaine, OHIO

HOLE DESIGNATION: GP-19-18  
DATE COMPLETED: 24 January 2018  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE/A. FEL

OVERBURDEN LOG 038443-50-YWI GPJ GHD Corp 24/7/18

| DEPTH<br>ft BGS   | STRATIGRAPHIC DESCRIPTION & REMARKS  | DEPTH<br>ft BGS | GAS PROBE | SAMPLE    |          |         |         |
|---|--|-----------------|-----------|-----------|----------|---------|---------|
|   |  |                 |           | NUMBER    | INTERVAL | REC (%) | N VALUE |
|   |  |                 |           |           |          |         |         |
| 2   | TOPSOIL<br>GC-CLAYEY GRAVEL (FILL), with medium to coarse sand, fine grained, slightly consolidated, well graded, dark brown, dry<br>- crushed rock at 1.0ft BGS<br>- crushed rock at 3.2ft BGS<br>- light brown staining at 4.1ft BGS | 0.10<br>4.20    |           | 1DP       |          | 66      | 0 / 0   |
| 4   | SM-SILTY SAND (FILL), fine grained, slightly consolidated, well graded, light gray, dry  |                 |           | 2DP       |          | 46      | 0 / 0   |
| 6   |  |                 |           | 11-12-063 |          |         |         |
| 8   |  |                 |           | 3DP       |          | 50      | 0.6     |
| 10  | - medium grained, plastic pieces at 9.0ft BGS<br>- medium to coarse grained at 10.0ft BGS<br>- medium grained, plastic pieces at 10.2ft BGS  |                 |           |           |          |         | 1.6     |
| 12  | - concrete piece at 13.2ft BGS   |                 |           |           |          |         | 0 / 0   |
| 14  |  |                 |           |           |          |         |         |
| 16  | - slag at 15.0ft BGS<br>- plastic and glass pieces at 15.3ft BGS<br>- wet at 16.0ft BGS  |                 |           |           |          |         |         |
| 18  |  |                 |           |           |          |         |         |
| 20  | CL-SANDY CLAY (FILL), fine to medium sand, cohesive, low plasticity, dark gray, moist<br>- transitions to native sandy material at 20.0ft BGS  | 19.00<br>20.00  |           | 4DP       |          | 94      | 0 / 0   |
| 22  | END OF BOREHOLE @ 20.0ft BGS   |                 |           |           |          |         |         |
| 24  |  |                 |           |           |          |         |         |
| 26  |  |                 |           |           |          |         |         |
| 28  |  |                 |           |           |          |         |         |
| <b>NOTES:</b> MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE |  |                 |           |           |          |         |         |
| CHEMICAL ANALYSIS   |  |                 |           |           |          |         |         |



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
 PROJECT NUMBER: 038443  
 CLIENT: PRP GROUP  
 LOCATION: MORaine, OHIO

HOLE DESIGNATION: GP-20-18  
 DATE COMPLETED: 22 January 2018  
 DRILLING METHOD: GEOPROBE  
 FIELD PERSONNEL: J. CLOSE/A. FELDMAN

| DEPTH<br>ft BGS  | STRATIGRAPHIC DESCRIPTION & REMARKS   | DEPTH<br>ft BGS | GAS PROBE       | SAMPLE                     |          |         |                      |
|--|---|-----------------|-----------------|----------------------------|----------|---------|----------------------|
|  |   |                 |                 | NUMBER                     | INTERVAL | REC (%) | N <sup>o</sup> VALUE |
|  |   |                 |                 |                            |          |         |                      |
| 2  | SM-SILTY SAND (FILL), loose, fine to medium grained, trace coarse grained, well graded, brown, moist<br><br>SW-GRAVELLY SAND (FILL), loose, fine gravel, medium grained, with coarse grained, well graded, light brown, dry | 0.50<br>1.00    | CONCRETE        | 1DP                        |          | 90      | 0 / 0                |
| 4  | SW-SAND (FILL), foundry sand, loose, fine grained, slightly consolidated, well graded, dark gray, dry<br>- slag pieces at 3.5ft BGS   | 3.50            | 0.5 WELL CASING |                            |          |         |                      |
| 6  | SM-SILTY SAND (FILL), foundry sand, fine grained, trace medium grained, slightly consolidated, well graded, light gray, dry<br>- 0.7' wet at 4.0ft BGS  | 6.70            | BENTONITE GROUT | NEG SUDAN IV               |          |         | 0.5                  |
| 8  | - crushed rock, with medium grained at 5.3ft BGS<br>- 0.5' wet at 6.0ft BGS<br>- crushed black rock material at 6.5ft BGS   | 9.10            | 2-3/4 BOREHOLE  | 2DP                        |          | 70      | 0 / 0                |
| 10   | GM-SILTY GRAVEL (FILL), with medium to coarse sand, loose, fine grained, well graded, orangish brown, moist<br>- glass pieces at 7ft BGS<br>- 0.1' clay section at 8.7ft BGS  | 10.00           | SAND            | 11-12-060 NEG SUDAN IV 3DP |          |         |                      |
| 12   | CL-SANDY CLAY (FILL), trace fine gravel, medium sand, cohesive, low plasticity  | 20.00           | 0.5 WELL SCREEN |                            |          | 64      | 0 / 0                |
| 14   | GW-SANDY GRAVEL (native), trace fine sand, loose, medium to coarse sand, fine grained, well graded, light brown, dry<br>- crushed rock pieces at 12.5ft BGS   |                 |                 |                            |          |         |                      |
| 16   | - crushed rock pieces at 13.5ft BGS<br>- rock at 15.0ft BGS<br>- gray staining from 15.0 to 16.0ft BGS  |                 |                 |                            |          |         |                      |
| 18   |   |                 |                 |                            |          |         |                      |
| 20   | - crushed rock pieces at 19.7ft BGS<br><br>END OF BOREHOLE @ 20.0ft BGS   |                 |                 |                            |          |         |                      |
| 22   |   |                 |                 |                            |          |         |                      |
| 24   |   |                 |                 |                            |          |         |                      |
| 26   |   |                 |                 |                            |          |         |                      |
| 28   |   |                 |                 |                            |          |         |                      |
| NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE |   |                 |                 |                            |          |         |                      |
| OVERBURDEN LOG 038443-50-WI GPJ GHD Corp 24/7/18                               |   |                 |                 |                            |          |         |                      |
| CHEMICAL ANALYSIS  |   |                 |                 |                            |          |         |                      |



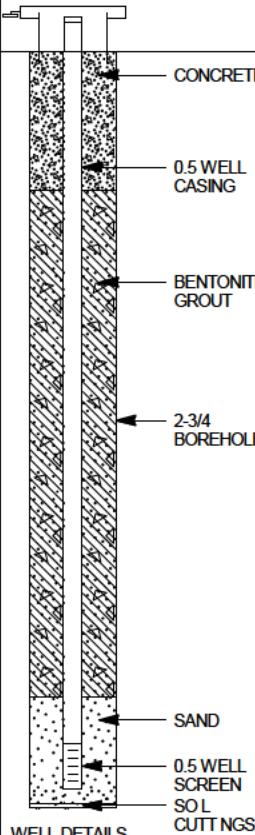
# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
 PROJECT NUMBER: 038443  
 CLIENT: PRP GROUP  
 LOCATION: MORaine, OHIO

HOLE DESIGNATION: GP-25-18  
 DATE COMPLETED: 29 January 2018  
 DRILLING METHOD: GEOPROBE  
 FIELD PERSONNEL: J. CLOSE/A. FELDMAN

| DEPTH<br>ft BGS  | STRATIGRAPHIC DESCRIPTION & REMARKS  | DEPTH<br>ft BGS | GAS PROBE | SAMPLE |          |         |                      |                 |
|--|--|-----------------|-----------|--------|----------|---------|----------------------|-----------------|
|  |  |                 |           | NUMBER | INTERVAL | REC (%) | N <sup>o</sup> VALUE | PID (ppm) / RAD |
| 2  | SW-SAND (FILL), trace silt, loose, medium to coarse grained, little fine grained, well graded, black, moist<br>- rock pieces at 0.7ft BGS  | 2.50            |           |        |          |         |                      |                 |
| 4  | GC-GRAVELLY CLAY (FILL), fine gravel, cohesive, low plasticity, dark gray/olive green, moist<br>- concrete fragments at 3.0ft BGS  | 3.20            |           |        |          |         |                      |                 |
| 6  | CL-CLAY (FILL), little fine gravel, cohesive, low plasticity, olive green, moist<br>- 2 black medium grained foundry sand at 3.9ft BGS   | 5.50            |           |        |          |         |                      |                 |
| 8  | SW-SAND (FILL), little silt, loose, medium to coarse grained, well graded, gray/olive green, dry<br>- red clay brick powder/pieces at 8.9ft BGS                                    | 10.00           |           |        |          |         |                      |                 |
| 10   | SW/GW-SAND/GRAVEL (FILL), loose, medium to coarse sand, fine gravel, well graded, dark gray/black, dry   |                 |           |        |          |         |                      |                 |
| 12   |  |                 |           |        |          |         |                      |                 |
| 14   |  |                 |           |        |          |         |                      |                 |
| 16   | SW-SAND (FILL), trace silt, loose, fine to medium grained, well graded, black, dry<br>- medium to coarse grained, gray at 16.0ft BGS<br>- white clay brick fragments at 16.2ft BGS | 14.50           |           |        |          |         |                      |                 |
| 18   | SW-SILTY SAND (FILL), medium to coarse grained, consolidated, rust/dark gray, dry  | 16.70           |           |        |          |         |                      |                 |
| 20   | END OF BOREHOLE @ 20.0ft BGS   | 20.00           |           |        |          |         |                      |                 |
| 22   |  |                 |           |        |          |         |                      |                 |
| 24   |  |                 |           |        |          |         |                      |                 |
| 26   |  |                 |           |        |          |         |                      |                 |
| 28   |  |                 |           |        |          |         |                      |                 |
| NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE |  |                 |           |        |          |         |                      |                 |
| OVERBURDEN LOG 038443-50-WI GPJ GHD Corp 24/7/18                               |  |                 |           |        |          |         |                      |                 |
| CHEMICAL ANALYSIS  |  |                 |           |        |          |         |                      |                 |



WELL DETAILS  
 Screened interval:  
 15.00 to 16.00ft BGS  
 Length: 1ft  
 Diameter: 0.5in  
 Material: TEFLOn LINED  
 POLYETHYLENE  
 Seal:  
 3.00 to 14.00ft BGS  
 Material: BENTONITE GROUT  
 Sand Pack:  
 14.00 to 16.40ft BGS  
 Material: SAND



## STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443  
CLIENT: PRP GROUP  
LOCATION: MORaine, OHIO

HOLE DESIGNATION: GP-26-18  
DATE COMPLETED: 29 January 2018  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE/A. FEL

OVERBURDEN LOG 038443-50-YWI GPJ GHD Corp 24/7/18

| DEPTH<br>ft BGS | STRATIGRAPHIC DESCRIPTION & REMARKS   | DEPTH<br>ft BGS | GAS PROBE | SAMPLE |          |         |          |
|-----------------|---|-----------------|-----------|--------|----------|---------|----------|
|                 |   |                 |           | NUMBER | INTERVAL | REC (%) | *N VALUE |
|                 |   |                 |           |        |          |         |          |
| 2               | TOPSOIL<br>SW-SAND (FILL), trace fine gravel, loose, medium to coarse grained, well graded, dark gray/brown, dry  | 0.25            |           | 1DP    |          |         | 0 / 0    |
| 4               | SW-SAND (FILL), trace fine gravel, loose, fine to medium grained, trace coarse grained, well graded, dark brown, dry<br>- slag pieces at 4.0ft BGS<br>- increase in silt content, slightly consolidated, dark gray at 4.1ft BGS | 3.20            |           | 2DP    |          |         | 0 / 0    |
| 6               |   | 5.40            |           |        |          |         |          |
| 8               | SW-SAND (FILL), trace silt, loose, fine, medium and coarse grained, well graded, gray/light gray, dry   |                 |           |        |          |         |          |
| 10              |   |                 |           |        |          |         |          |
| 12              |   |                 |           |        |          |         |          |
| 14              | - red clay brick at 13.0ft BGS<br>SM-SILTY SAND (FILL), fine, medium and coarse grained, consolidated, dark gray  | 13.00           |           | 3DP    |          |         | 0 / 0    |
| 16              |   |                 |           |        |          |         |          |
| 18              |   |                 |           |        |          |         |          |
| 20              | - red clay brick at 19.8ft BGS<br>END OF BOREHOLE @ 20.0ft BGS  | 20.00           |           | 4DP    |          |         | 0 / 0    |
| 22              |   |                 |           |        |          |         |          |
| 24              |   |                 |           |        |          |         |          |
| 26              |   |                 |           |        |          |         |          |
| 28              |   |                 |           |        |          |         |          |

**NOTES:** MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE



## STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443  
CLIENT: PRP GROUP  
LOCATION: MORaine, OHIO

HOLE DESIGNATION: GP-27-18  
DATE COMPLETED: 30 January 2018  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE/A. FEL

OVERBURDEN LOG 038443-50-YWI GPJ GHD Corp 24/7/18

| DEPTH<br>ft BGS   | STRATIGRAPHIC DESCRIPTION & REMARKS   | DEPTH<br>ft BGS | GAS PROBE | SAMPLE          |          |         |         |
|---|---|-----------------|-----------|-----------------|----------|---------|---------|
|   |   |                 |           | NUMBER          | INTERVAL | REC (%) | N VALUE |
|   |   |                 |           |                 |          |         |         |
| 2   | SW-SAND (FILL), fine to medium grained, slightly consolidated, well graded, brown, dry<br><br>- concrete pieces at 1.8ft BGS<br>- 0.2' increase in silt content at 2.4ft BGS<br>- with fine gravel, with coarse grained, dark gray at 2.7ft BGS |                 |           | 1DP             |          | 96      | 0 / 0   |
| 4   | - loose, increase in silt content at 5.0ft BGS  |                 |           |                 |          |         | 2.7     |
| 6   |   |                 |           |                 |          |         |         |
| 8   |   |                 |           |                 |          |         |         |
| 10  | SW-SAND (FILL), trace fine gravel, loose, fine to medium grained, with coarse grained, well graded, brown, dry<br><br>- 0.5' metallic paper at 11.8ft BGS   | 9.60            |           |                 |          | 100     | 3.2     |
| 12  | SM-SILTY SAND (FILL), fine to medium grained, slightly consolidated, well graded, dark gray, dry<br>- 0.2' multicolored frock fragments at 12.9ft BGS<br>- 0.1' light green slag fragments at 13.4ft BGS<br>- moist at 15.0ft BGS               | 12.40           |           | 2DP<br>7.8-0.67 |          |         | 0 / 0   |
| 14  |   |                 |           |                 |          |         |         |
| 16  | - wet at 17.0ft BGS   |                 |           |                 |          |         |         |
| 18  | - clayey, brown at 19.0ft BGS   |                 |           |                 |          |         |         |
| 20  | END OF BOREHOLE @ 20.0ft BGS  | 20.00           |           | 3DP             |          | 80      | 0 / 0   |
| 22  |   |                 |           |                 |          |         |         |
| 24  |   |                 |           |                 |          |         |         |
| 26  |   |                 |           |                 |          |         |         |
| 28  |   |                 |           |                 |          |         |         |
| <b>NOTES:</b> MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE |   |                 |           |                 |          |         |         |
| CHEMICAL ANALYSIS   |   |                 |           |                 |          |         |         |







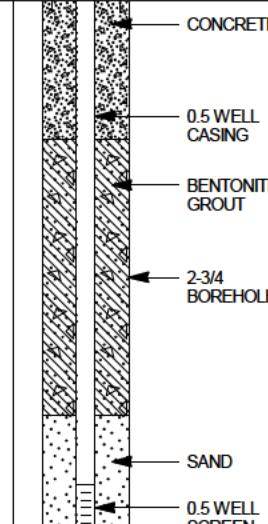
## STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443  
CLIENT: PRP GROUP  
LOCATION: MORAINE, OHIO

HOLE DESIGNATION: GP-30-18  
DATE COMPLETED: 17 January 2018  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE

OVERBURDEN LOG 038443-50-YWI GPJ GHD Corp 24/7/18

| DEPTH<br>ft BGS   | STRATIGRAPHIC DESCRIPTION & REMARKS   | DEPTH<br>ft BGS      | GAS PROBE   | SAMPLE |          |         |          |
|---|---|----------------------|---|--------|----------|---------|----------|
|   |   |                      |   | NUMBER | INTERVAL | REC (%) | *N VALUE |
|   |   |                      |  |        |          |         |          |
| 2   | TOPSOIL, grass<br>GW-SANDY GRAVEL (FILL), loose, medium to coarse sand, fine grained, well graded, light brown, dry   | 0.20<br>0.50<br>1.40 |   | 1DP    |          | 58      | 0 / 0    |
| 4   | SM-SILTY SAND (FILL), fine grained, slightly consolidated, well graded, gray, dry   | 4.00                 |   |        |          |         |          |
| 6   | GW-SANDY GRAVEL (FILL), medium to coarse sand, fine grained, slightly consolidated, well graded, light brown, dry, glass pieces, plastic pieces             | 5.00<br>5.50         |   |        |          |         |          |
| 8   | SM-SILTY SAND (FILL), fine grained, slightly consolidated, gray, dry  |                      |   |        |          |         |          |
| 10  | SM-SILTY SAND (FILL), fine grained, trace coarse grained, slightly consolidated, well graded, light gray, wet   |                      |   |        |          |         |          |
| 12  | GM-SILTY GRAVEL, with medium to coarse sand, fine grained, slightly consolidated, well graded, orangish brown, moist<br>- glass pieces at 9.2ft BGS         | 9.50                 |   |        |          |         |          |
| 14  | GW-SAND GRAVEL (native), medium to coarse sand, fine to coarse grained, slightly consolidated, well graded, light brown, dry<br>- broken rock at 10.5ft BGS |                      |   |        |          |         |          |
| 16  | - dark brown staining at 15.1ft BGS   |                      |   |        |          |         |          |
| 18  | - light gray rock at 16.5ft BGS<br>- 0.2' light brown sand at 17.0ft BGS  |                      |   |        |          |         |          |
| 20  | - light gray rock at 18.5ft BGS<br>- light gray rock at 19.5ft BGS  | 20.00                |   |        |          |         |          |
| 22  | END OF BOREHOLE @ 20.0ft BGS  |                      |   |        |          |         |          |
| 24  |   |                      |   |        |          |         |          |
| 26  |   |                      |   |        |          |         |          |
| 28  |   |                      |   |        |          |         |          |
| <b>NOTES:</b> MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE                 |   |                      |   |        |          |         |          |
| CHEMICAL ANALYSIS  |   |                      |   |        |          |         |          |



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
 PROJECT NUMBER: 038443  
 CLIENT: PRP GROUP  
 LOCATION: MORaine, OHIO

HOLE DESIGNATION: GP-31-18  
 DATE COMPLETED: 19 January 2018  
 DRILLING METHOD: GEOPROBE  
 FIELD PERSONNEL: J. CLOSE

| DEPTH<br>ft BGS  | STRATIGRAPHIC DESCRIPTION & REMARKS   | DEPTH<br>ft BGS | GAS PROBE | SAMPLE |          |         |          |
|--|---|-----------------|-----------|--------|----------|---------|----------|
|  |   |                 |           | NUMBER | INTERVAL | REC (%) | N' VALUE |
| 2  | ASPHALT<br><br>SW-SAND (FILL), foundry sand, loose, medium to coarse grained, some fine grained, well graded, black/dark gray, dry<br>- red clay brick fragments at 1.0ft BGS<br>- yellow/tan brick fragments from 1.7 to 1.9ft BGS<br>- rust staining at 2.0ft BGS<br>- fine grained, gray, moist from 2.4 to 2.6ft BGS<br>- little coarse gravel pieces at 2.8ft BGS<br>- little coarse gravel pieces at 4.7ft BGS<br>- slag fragments at 5.3ft BGS | 0.17            |           | 1DP    |          | 76      | 0 / 0    |
| 4  |   | 5.80            |           |        |          |         |          |
| 6  |   | 6.40            |           |        |          |         |          |
| 8  | CL-CLAY (FILL), trace silt and fine sand, cohesive, low plasticity, dark brown, moist<br>- fine gravel pieces at 6.0ft BGS  |                 |           | 2DP    |          | 78      | 0 / 0    |
| 10   | SW-SAND (native), with fine gravel, loose, fine, medium and coarse grained, well graded, tan/off white, dry   |                 |           |        |          |         |          |
| 12   |   |                 |           |        |          |         |          |
| 14   |   |                 |           |        |          |         |          |
| 16   |   |                 |           |        |          |         |          |
| 18   | GM-SILTY GRAVEL, fine grained, slightly cohesive, well graded, medium brown, dry  | 18.00           |           |        |          |         |          |
| 20   | SW-SAND, clean, loose, fine to medium grained, well graded, light brown/tan, dry  | 19.20           |           |        |          |         |          |
|  | END OF BOREHOLE @ 20.0ft BGS  | 20.00           |           |        |          |         |          |
| 22   |   |                 |           |        |          |         |          |
| 24   |   |                 |           |        |          |         |          |
| 26   |   |                 |           |        |          |         |          |
| 28   |   |                 |           |        |          |         |          |
| NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE |   |                 |           |        |          |         |          |
| OVERBURDEN LOG 038443-50-WI GPJ GHD Corp 24/7/18                               |   |                 |           |        |          |         |          |
| CHEMICAL ANALYSIS  |   |                 |           |        |          |         |          |



## STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443  
CLIENT: PRP GROUP  
LOCATION: MORAINE, OHIO

HOLE DESIGNATION: GP-32-18  
DATE COMPLETED: 10 January 2018  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE

OVERBURDEN LOG 038443-50-YWI GPJ GHD Corp 24/7/18

| DEPTH<br>ft BGS | STRATIGRAPHIC DESCRIPTION & REMARKS  | DEPTH<br>ft BGS                  | GAS PROBE   | SAMPLE                   |          |          |         |                       |
|-----------------|--|----------------------------------|---|--------------------------|----------|----------|---------|-----------------------|
|                 |  |                                  |   | NUMBER                   | INTERVAL | REC (%)  | N VALUE | PID (ppm) / RAD       |
|                 |  |                                  |   |                          |          |          |         |                       |
| 2               | GW-SANDY GRAVEL (FILL), few silt, loose, fine, medium and coarse sand, fine grained, well graded, dark gray/light brown, moist<br><br>SW-GRAVELLY SAND (FILL), few silt, fine gravel, fine, medium and coarse grained, slightly consolidated, well graded, dark gray/black, moist<br>- 0.2' section light brown sand and coarse gravel at 1.8ft BGS<br><br>SW-SAND (FILL), with fine gravel, fine to medium grained, slightly consolidated, well graded, dark gray, dry<br>- 0.2' dark brown at 3.0ft BGS<br>- 0.1' dark brown at 4.7ft BGS<br>- fine gravel pieces, slough at 5.1ft BGS<br>- yellowish/orange coarse gravel piece at 6.5ft BGS<br><br>SM-SILTY SAND (FILL), fine to medium grained, slightly consolidated, well graded, light gray, dry | 1.00<br>2.00<br>8.00<br>9.70     | CONCRETE<br>0.5 WELL CASING<br>BENTONITE GROUT<br>2-3/4 BOREHOLE<br>SAND<br>0.5 WELL SCREEN | 1DP<br>2DP<br>10-11'-037 |          | 70<br>66 |         | 2.2<br>0 / 0<br>0 / 0 |
| 10              | SW-SAND (FILL), loose, medium to coarse grained, well graded, light brown, dry   | 10.00                            |   | 3DP                      |          | 20       |         | 0 / 0                 |
| 14              | - coarse gravel pieces, glass, and white powder at 14.0ft BGS<br>- increase in silt content, fine gravel pieces, yellowish orange at 14.7ft BGS  | 14.00<br>14.70                   |   |                          |          |          |         |                       |
| 16              |  | 16.00                            |   |                          |          |          |         |                       |
| 18              |  | 18.00                            |   |                          |          |          |         |                       |
| 20              | - tan at 18.9ft BGS<br>SW-SAND (FILL), with fine gravel, medium to coarse grained, slightly consolidated, well graded, light gray, dry<br><br>SW-GRAVELLY SAND (FILL), loose, fine gravel, medium to coarse grained, well graded, dark brown/orange, dry   | 18.90<br>19.00<br>19.80<br>20.00 |   | 4DP                      |          | 32       |         | 0 / 0                 |
| 22              | END OF BOREHOLE @ 20.0ft BGS   | 22.00                            |   |                          |          |          |         |                       |
| 24              |  | 24.00                            |   |                          |          |          |         |                       |
| 26              |  | 26.00                            |   |                          |          |          |         |                       |
| 28              |  | 28.00                            |   |                          |          |          |         |                       |

**NOTES:** MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

**CHEMICAL ANALYSIS**



## STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
PROJECT NUMBER: 038443  
CLIENT: PRP GROUP  
LOCATION: MORAINE, OHIO

HOLE DESIGNATION: GP-33-18  
DATE COMPLETED: 22 January 2018  
DRILLING METHOD: GEOPROBE  
FIELD PERSONNEL: J. CLOSE

OVERBURDEN LOG 038443-50-YWI GPJ GHD Corp 24/7/18

| DEPTH<br>ft BGS  | STRATIGRAPHIC DESCRIPTION & REMARKS   | DEPTH<br>ft BGS      | GAS PROBE | SAMPLE |          |         |          |
|--|---|----------------------|-----------|--------|----------|---------|----------|
|  |   |                      |           | NUMBER | INTERVAL | REC (%) | *N VALUE |
|  |   |                      |           |        |          |         |          |
| 2  | SW-SAND (FILL), loose, fine to medium grained, well graded, dark brown, moist<br>SW-GRAVELLY SAND (FILL), with fine gravel, loose, medium to coarse grained, well graded, brown, dry<br>SM-SILTY SAND (FILL), with fine gravel, slightly consolidated, well graded, dark brown, dry | 1.00<br>2.30<br>3.60 |           | 1DP    |          | 70      | 0 / 0    |
| 4  | SW-GRAVELLY SAND (FILL), medium to coarse grained, with fine grained, slightly consolidated, well graded, dark brown, dry<br>- black cinders at 3.7ft BGS<br>- yellowish brown staining at 4.3ft BGS  | 6.00                 |           | 2DP    |          | 94      | 0 / 0    |
| 6  | SM-SILTY SAND, foundry sand, fine grained, trace coarse grained, consolidated, well graded, light gray, dry   |                      |           |        |          |         |          |
| 8  |   |                      |           |        |          |         |          |
| 10   | - moist at 11.0ft BGS   |                      |           |        |          |         |          |
| 12   | GW-SAND GRAVEL (FILL), loose, medium to coarse sand, fine grained, well graded, orangish brown, dry   | 12.00                |           | 3DP    |          | 40      | 0 / 0    |
| 14   | CL-SANDY CLAY (FILL), fine sand, with medium sand, cohesive, slightly compact, brown, dry   | 14.00                |           |        |          |         |          |
| 16   |   |                      |           |        |          |         |          |
| 18   | GW-SANDY GRAVEL (native), loose, medium to coarse sand, fine grained, well graded, light brown, dry   | 17.00                |           |        |          |         |          |
| 20   | END OF BOREHOLE @ 20.0ft BGS  | 20.00                |           |        |          |         |          |
| 22   |   |                      |           |        |          |         |          |
| 24   |   |                      |           |        |          |         |          |
| 26   |   |                      |           |        |          |         |          |
| 28   |   |                      |           |        |          |         |          |
| <b>WELL DETAILS</b><br>Screened interval:<br>17.50 to 18.50ft BGS<br>Length: 1ft<br>Diameter: 0.5in<br>Material: TEFLON LINED POLYETHYLENE<br>Seal:<br>3.00 to 16.00ft BGS<br>Material: BENTONITE GROUT<br>Sand Pack:<br>16.00 to 18.70ft BGS<br>Material: #3 SAND |   |                      |           |        |          |         |          |
| ADP 17.5-18.5<br>078 NEG<br>SUDAN IV   |   |                      |           |        |          |         |          |
| <b>NOTES:</b> MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE  |   |                      |           |        |          |         |          |
| CHEMICAL ANALYSIS  |   |                      |           |        |          |         |          |



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: SOUTH DAYTON DUMP AND LANDFILL SITE  
 PROJECT NUMBER: 038443  
 CLIENT: PRP GROUP  
 LOCATION: MORaine, OHIO

HOLE DESIGNATION: GP-34-18  
 DATE COMPLETED: July 31, 2018  
 DRILLING METHOD: GEOPROBE  
 FIELD PERSONNEL: J. CLOSE

| DEPTH<br>ft BGS   | STRATIGRAPHIC DESCRIPTION & REMARKS  | DEPTH<br>ft BGS | GAS PROBE   | SAMPLE          |          |         |          |
|---|--|-----------------|---|-----------------|----------|---------|----------|
|   |  |                 |   | NUMBER          | INTERVAL | REC (%) | N' VALUE |
| 2   | TOPSOIL, silt, grass<br>SW/GW-SAND/GRAVEL (FILL), loose, fine sand, fine gravel, well graded, tan/off-white, dry | 0.50            | CONCRETE  | 1GP             |          | 75      | 0 / 0    |
| 4   | SM-SILTY SAND (FILL) (foundry sand), slightly consolidated, fine grained, well graded, gray, dry                 | 3.50            |   |                 |          |         |          |
| 6   | SW/GW-SAND/GRAVEL (FILL), loose, fine sand, fine gravel, well graded, tan/off-white, dry                         | 4.00            | BENTONITE GROUT   | 2GP             |          | 40      | 0 / 0    |
| 8   | SW-SAND (FILL), loose, fine to medium grained, well graded, brown/dark gray, dry                                 | 4.50            | 2-3/4 BOREHOLE  |                 |          |         |          |
| 10  | SM-SILTY SAND (FILL), consolidated, fine grained, dark brown, dry  | 7.50            | SAND  |                 |          |         |          |
| 12  | SW/GW-SAND/GRAVEL (NATIVE), loose, medium to coarse sand, fine gravel, well graded, tan/light brown, dry         | 9.00            | 0.5 WELL SCREEN   | 3GP-10-11'      |          | 55      | 0 / 0    |
| 14  |  |                 | <b>WELL DETAILS</b>   |                 |          |         |          |
| 16  |  |                 | Screened interval:<br>10 00 to 11.00ft BGS                            |                 |          |         |          |
| 18  |  |                 | Length: 1ft<br>Diameter: 0.5in<br>Material: TEFLON LINED POLYETHYLENE |                 |          |         |          |
| 20  |  |                 | Seal:<br>2.00 to 9 00ft BGS<br>Material: BENTONITE GROUT              |                 |          |         |          |
| 22  | - wet at 22.3ft BGS  |                 | Sand Pack:<br>9.00 to 11.00ft BGS<br>Material: SAND                   |                 |          |         |          |
| 24  | END OF BOREHOLE @ 24.0ft BGS   | 24.00           |   | 6GP NEG SUDAN N |          | 65      | 0 / 0    |
| 26  |  |                 |   |                 |          |         |          |
| 28  |  |                 |   |                 |          |         |          |
| 30  |  |                 |   |                 |          |         |          |
| 32  |  |                 |   |                 |          |         |          |
| 34  |  |                 |   |                 |          |         |          |
| <b>NOTES:</b> MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE<br>WATER FOUND<br>CHEMICAL ANALYSIS |  |                 |   |                 |          |         |          |

## Attachment 2

Table 1

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**Soil Gas Probes - Field Parameters - March 2018**  
**South Dayton Dump Landfill**  
**Moraine, Ohio**

| Location             | Field Parameters    |   |                                  |              |                  |                           |              |
|----------------------|---------------------|---|----------------------------------|--------------|------------------|---------------------------|--------------|
|                      | Pressure<br>(in WC) | CO <sub>2</sub><br>% v/v                              | O <sub>2</sub><br>% v/v          | LEL<br>% v/v | Methane<br>% v/v | H <sub>2</sub> S<br>(ppm) | VOC<br>(ppm) |
| GP01-18              | -0.0211             | 7.3   | 0.0                              | >100         | 21.6             | 0                         | 0.0          |
| GP02-09              | 0.00368             | 11.4  | 0.0                              | >100         | 14.6             | 0                         | 0.0          |
| GP03-09              | -0.00260            | 0.0   | 20.9                             | 0            | 0.0              | 0                         | 0.6          |
| GP04-09              | -0.00937            | 2.9   | 1.5                              | 13           | 0.7              | 0                         | 0.3          |
| GP05-09              | -0.00331            | 5.8   | 9.2                              | 0            | 0.0              | 0                         | 1.1          |
| GP06-09              |                     | Could not be found (flushmount)                       |                                  |              |                  |                           |              |
| GP07-09              |                     | Under a tire pile (flushmount)                        |                                  |              |                  |                           |              |
| GP08-09              |                     | Could not be found (stick up)                         |                                  |              |                  |                           |              |
| GP09-09              | -0.00233            | 2.8   | 20.2                             | 0            | 0.0              | 0                         | 0.6          |
| GP10-09 <sup>2</sup> | 0.00253             | 2.9   | 0.0                              | 7            | 0.4              | 0                         | 0.7          |
|                      | 0.00371             | 2.9   | 0.0                              | 7            | 0.3              | 0                         | 0.6          |
| GP11-09              | -0.00341            | 2.8   | 19.5                             | 0            | 0.0              | 0                         | 0.5          |
| GP12-09              | -0.0241             | 0.1   | 21                               | 0            | 0.0              | 0                         | 0.0          |
| GP13-09              | -0.0158             | 8.5   | 2.1                              | 0            | 0.0              | 0                         | 0.2          |
| GP14-09              | 0.00243             | 1.2   | 18.3                             | 0            | 0.0              | 0                         | 0.5          |
| GP15-09              | -0.01462            | 5.3   | 14.6                             | 0            | 0.0              | 0                         | 0.9          |
| GP16-09              | -0.00976            | 5.4   | 0.0                              | 50           | 2.5              | 0                         | 0.4          |
| GP17-09              |                     | Buried under asphalt                                  |                                  |              |                  |                           |              |
| GP18-09              |                     | Buried under asphalt                                  |                                  |              |                  |                           |              |
| GP19-18              | -0.0494             | 8.5   | 0.3                              | 63           | 3.2              | 0                         | 4.8          |
| GP20-18              | -0.0272             | 8.3   | 4.1                              | 0            | 0.0              | 0                         | 3.0          |
| GP21-09              | -0.0572             | Restricted pump flow on GEM2000+ and PID (valve open) |                                  |              |                  |                           |              |
| GP22-13              | -0.0393             | 9.8   | 0.0                              | 0            | 0.0              | 0                         | 0.2          |
| GP23-13              | -0.00476            | 5.4   | 14.9                             | 0            | 0                | 0                         | 0.1          |
| GP24A-13             | -0.00728            | 7.3   | 13.0                             | 0            | 0.0              | 0                         | 0.1          |
| GP24B-13             | -0.00069            | 3.7   | 17.8                             | 0            | 0.0              | 0                         | 0.0          |
| GP25-18              | -0.00585            | 5.2   | 0.6                              | 58           | 2.9              | 0                         | 0.0          |
| GP26-18              | -0.0301             | 7.7   | 0.0                              | 51           | 2.5              | 0                         | 3.3          |
| GP27-18              | 0.00217             | 4.7   | 0.0                              | 17           | 0.8              | 0                         | 20.2         |
| GP28-18              | 0.00323             | 3.8   | 0.0                              | >100         | 5.3              | 0                         | 6.5          |
| GP29-18              | -0.0213             | 4.4   | 2.5                              | 7            | 0.3              | 0                         | 10.6         |
| GP30-18              | -0.00732            | 0.0   | 20.7                             | 0            | 0.0              | 0                         | 0.3          |
| GP31-18              | 0.0152              | 0.5   | 19.7                             | 0            | 0.0              | 0                         | 2.0          |
| GP32-18              | 0.01553             | 9.2   | 8.0                              | 0            | 0.0              | 0                         | 0.0          |
| GP33-18              | -0.0301             | 11.9  | 2.5                              | 0            | 0.0              | 0                         | 0.0          |
| USEPA GP-1 North     | -0.462              | 1.7   | 19.6                             | 0            | 0.0              | 0                         | 0.0          |
| USEPA GP-1 Middle    | -0.00342            | 0.6   | 20.7                             | 0            | 0.0              | 0                         | 0.0          |
| USEPA GP-1 South     | -0.431              |   | No flow on GEM2000+; No flow PID |              |                  |                           |              |
| USEPA GP-2           |                     | Excluded from Field Parameter Monitoring              |                                  |              |                  |                           |              |
| USEPA GP-3 North     | -0.00769            | 2.2   | 19.1                             | 0            | 0                | 0                         | 0.1          |
| USEPA GP-3 SW        | 0.00512             | 1.1   | 19.6                             | 0            | 0                | 0                         | 0            |
| USEPA GP-3 SE        | 0.00225             |   | No flow on GEM2000+; No flow PID |              |                  |                           |              |
| USEPA GP-4 North     | -0.00813            | 2.5   | 17.7                             | 0            | 0.0              | 0                         | 0.1          |
| USEPA GP-4 Middle    | -0.00971            | 2.4   | 18.8                             | 0            | 0.0              | 0                         | 0.0          |
| USEPA GP-4 South     | -0.00778            | 2.2   | 19.2                             | 0            | 0.0              | 0                         | 0.0          |
| USEPA GP-5 North     | -1.115              | 4.7   | 15.6                             | 0            | 0.0              | 0                         | 0.0          |
| USEPA GP-5 South     | -0.00637            | 4.4   | 16.2                             | 0            | 0.0              | 0                         | 0.0          |
| USEPA GP-6 North     | -0.00475            | 3.2   | 17.5                             | 0            | 0.0              | 0                         | 0.0          |
| USEPA GP-6 Middle    | -0.00168            | 4.0   | 16.4                             | 0            | 0.0              | 0                         | 0.0          |
| USEPA GP-6 South     | -0.00316            | 5.1   | 14.4                             | 0            | 0.0              | 0                         | 0.0          |
| USEPA GP-7           |                     | Could not be found                                    |                                  |              |                  |                           |              |

[1] - North American Datum of 1983 (NAD83), U.S. Survey feet

3/22/2018

Barometric Pressure

|                  |                            |                     |
|------------------|----------------------------|---------------------|
| CO <sub>2</sub>  | Carbon Dioxide             | 29.48" Hg           |
| O <sup>2</sup>   | Oxygen                     | Rel Pressure        |
| LEL              | Lower Explosive Limit      | -0000.08"           |
| H <sub>2</sub> S | Hydrogen Sulfide           | Weather             |
| VOC              | Volatile Organic Compounds | Clear, sunny, 34° F |
| BTOR             | Below Top of Riser         | Forecast            |
| % v/v            | Percent by Volume          | Sunny, 48° F        |
| in WC            | Inches Water Column        |                     |

Table 2a

Page 1 of 1

**Soil Gas Probes - Field Parameters - August 2018**  
**South Dayton Dump Landfill**  
**Moraine, Ohio**

| Location          | Field Parameters    |  |           |                         |              |                               |                           |              |
|-------------------|---------------------|--|-----------|-------------------------|--------------|-------------------------------|---------------------------|--------------|
|                   | Pressure<br>(in WC) | CO <sub>2</sub><br>% v/v                 | CO<br>ppm | O <sub>2</sub><br>% v/v | LEL<br>% v/v | Methane (Unfiltered)<br>% v/v | H <sub>2</sub> S<br>(ppm) | VOC<br>(ppm) |
| GP01-18           |                     | 16.4                                     | 0         | 0.0                     | >100         | 35.4                          | 1                         | 2.6          |
| GP02-09           |                     | 13.1                                     | 1         | 0.0                     | >100         | 14.8                          | 8                         | 0.0          |
| GP03-09           |                     | 6.4                                      | 0         | 11.5                    | 0            | 0.0                           | 0                         | 0.0          |
| GP04-09           |                     | 5.5                                      | 1         | 0.2                     | 5            | 0.2                           | 0                         | 0.0          |
| GP05-09           |                     | 10.2                                     | 1         | 7.3                     | 0            | 0.0                           | 0                         | 0.0          |
| GP06-09           |                     | 4.7                                      | 77        | 13.8                    | 3            | 0.1                           | 0                         | 36.4         |
| GP07-18           |                     | 14.3                                     | 57        | 0.0                     | >100         | 60.4                          | 6                         | 205.0        |
| GP08-09           |                     | Insufficient gas flow. No readings.      |           |                         |              |                               |                           |              |
| GP09-09           |                     | 7.9                                      | 0         | 12.1                    | 0            | 0.0                           | 0                         | 0.0          |
| GP10-09           |                     | 2.9                                      | 1         | 0.0                     | 0            | 0.0                           | 0                         | 0.0          |
| GP11-09           |                     | 6.4                                      | 0         | 12.5                    | 0            | 0.0                           | 0                         | 0.0          |
| GP12-09           |                     | 0.9                                      | 0         | 18.8                    | 0            | 0.0                           | 0                         | 0.0          |
| GP13-09           |                     | 14.3                                     | 0         | 0.0                     | 0            | 0.0                           | 0                         | 0.0          |
| GP14-09           |                     | 3.3                                      | 0         | 16.2                    | 0            | 0.0                           | 0                         | 5.4          |
| GP15-09           |                     | 6.3                                      | 0         | 12.8                    | 0            | 0.0                           | 0                         | 0.0          |
| GP16-09           |                     | 9.7                                      | 0         | 0.0                     | 13           | 0.7                           | 0                         | 0.0          |
| GP19-18           |                     | 11.2                                     | 1         | 0.0                     | 40           | 2.0                           | 2                         | 0.0          |
| GP20-18           |                     | 10.7                                     | 1         | 2.4                     | 0            | 0.0                           | 0                         | 0.0          |
| GP21-09           |                     | 1.8                                      | 0         | 0.0                     | 33           | 1.6                           | 1                         | 0.0          |
| GP22-13           |                     | 9.3                                      | 1         | 0.0                     | 1            | 0.0                           | 0                         | 0.0          |
| GP23-13           |                     | 7.2                                      | 0         | 10.7                    | 0            | 0.0                           | 0                         | 0.0          |
| GP24A-13          |                     | 11.8                                     | 0         | 5.5                     | 0            | 0.0                           | 0                         | 0.0          |
| GP24B-13          |                     | 6.7                                      | 1         | 11.7                    | 0            | 0.0                           | 0                         | 0.0          |
| GP25-18           |                     | 3.8                                      | 1         | 1.6                     | 64           | 3.2                           | 6                         | 0.0          |
| GP26-18           |                     | 9.6                                      | 4         | 0.0                     | 52           | 2.6                           | 0                         | 0.0          |
| GP27-18           |                     | 7.7                                      | 1         | 0.0                     | 10           | 0.5                           | 0                         | 2.7          |
| GP28-18           |                     | 4.5                                      | 1         | 0.0                     | >100         | 7.0                           | 2                         | 0.0          |
| GP29-18           |                     | 5.0                                      | 1         | 0.0                     | 1            | 0.0                           | 0                         | 0.0          |
| GP30-18           |                     | 0.0                                      | 0         | 20.0                    | 0            | 0.0                           | 0                         | 0.0          |
| GP31-18           |                     | 0.9                                      | 0         | 18.9                    | 0            | 0.0                           | 0                         | 0.0          |
| GP32-18           |                     | 17.0                                     | 0         | 0.2                     | 4            | 0.2                           | 0                         | 0.1          |
| GP33-18           |                     | 13.1                                     | 0         | 1.0                     | 0            | 0.0                           | 0                         | 0.0          |
| GP34-18           |                     | 10.2                                     | 0         | 6.3                     | 0            | 0.0                           | 0                         | 0.0          |
| USEPA GP-1 North  |                     | 3.4                                      | 1         | 15.5                    | 0            | 0.0                           | 0                         | 0.0          |
| USEPA GP-1 Middle |                     | 2.3                                      | 1         | 16.9                    | 0            | 0.0                           | 0                         | 0.0          |
| USEPA GP-1 South  |                     | Insufficient gas flow. No readings.      |           |                         |              |                               |                           |              |
| USEPA GP-2        |                     | Excluded from Field Paramters Monitoring |           |                         |              |                               |                           |              |
| USEPA GP-3 North  |                     | Probe could not be located. No readings. |           |                         |              |                               |                           |              |
| USEPA GP-3 SW     |                     |  |           |                         |              |                               |                           |              |
| USEPA GP-3 SE     |                     |  |           |                         |              |                               |                           |              |
| USEPA GP-4 North  |                     | 6.7                                      | 0         | 2.9                     | 0            | 0.0                           | 0                         | 3.1          |
| USEPA GP-4 Middle |                     | 6.8                                      | 0         | 2.5                     | 0            | 0.0                           | 0                         | 2.9          |
| USEPA GP-4 South  |                     | 6.1                                      | 0         | 2.1                     | 0            | 0.0                           | 0                         | 2.7          |
| USEPA GP-5 North  |                     | 4.7                                      | 0         | 12.8                    | 0            | 0.0                           | 0                         | 2.7          |
| USEPA GP-5 South  |                     |  |           |                         |              |                               |                           |              |
| USEPA GP-6 North  |                     | 7.0                                      | 0         | 7.6                     | 0            | 0.0                           | 0                         | 3.1          |
| USEPA GP-6 Middle |                     | 7.6                                      | 0         | 6.7                     | 0            | 0.0                           | 0                         | 2.9          |
| USEPA GP-6 South  |                     | 8.1                                      | 0         | 5.7                     | 0            | 0.0                           | 0                         | 2.7          |
| USEPA GP-7        |                     | Probe could not be located. No readings. |           |                         |              |                               |                           |              |

[1] - North American Datum of 1983 (NAD83), U.S. Survey feet

8/24/2018

Barometric Pressure

29.34-29.38" Hg

Weather

Clear, 58° F

Forecast

Sunny, 81° F, possible afternoon rain

|                  |                            |
|------------------|----------------------------|
| CO <sub>2</sub>  | Carbon Dioxide             |
| O <sup>2</sup>   | Oxygen                     |
| LEL              | Lower Explosive Limit      |
| H <sub>2</sub> S | Hydrogen Sulfide           |
| VOC              | Volatile Organic Compounds |
| BTOR             | Below Top of Riser         |
| % v/v            | Percent by Volume          |
| in WC            | Inches Water Column        |

Table 2b

Page 1 of 1

**Soil Gas Probes - Field Parameters - September 2018**  
**South Dayton Dump Landfill**  
**Moraine, Ohio**

| Location                              | Field Parameters                         |                          |           |                         |                           |                         |                               |                             |                           |              |
|---------------------------------------|--|--------------------------|-----------|-------------------------|---------------------------|-------------------------|-------------------------------|-----------------------------|---------------------------|--------------|
|                                       | Pressure<br>(in WC)                      | CO <sub>2</sub><br>% v/v | CO<br>ppm | O <sub>2</sub><br>% v/v | LEL (Unfiltered)<br>% v/v | LEL (Filtered)<br>% v/v | Methane (Unfiltered)<br>% v/v | Methane (Filtered)<br>% v/v | H <sub>2</sub> S<br>(ppm) | VOC<br>(ppm) |
| GP01-18                               | 0.0212                                   | 16.40                    | 0         | 0.10                    | >100                      | >100                    | 34.60                         | 34.7                        | 0                         |              |
| GP02-09                               | 0.01557                                  | 13.50                    | 0         | 0.10                    | >100                      | >100                    | 14.60                         | 14.6                        | 0                         |              |
| GP03-09                               | 0.00377                                  |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP04-09                               | 0.0245                                   |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP05-09                               | 0.00054 to -0.00231                      |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP06-09                               | -0.00247                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP07-18                               | -0.00289                                 | 14.70                    | 36        | 0.00                    | >100/>100                 | 6                       | 39.4/39.3                     | 0.30                        | 0                         |              |
| GP08-09                               | 0.00011 to -0.00173                      |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP09-09                               | 0.00112                                  |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP10-09                               | -0.00073                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP11-09                               | -0.00690                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP12-09                               | -0.00594                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP13-09                               | -0.00843                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP14-09                               | -0.00326                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP15-09                               | -0.00776                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP16-09                               | -0.0240                                  | 11.30                    | 0         | 0.00                    | 28                        | 28                      | 1.40                          | 1.40                        | 0                         |              |
| GP19-18                               | 0.00805                                  |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP20-18                               | 0.0143                                   |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP21-09                               | -0.00252                                 | 2.10                     | 0         | 0.10                    | 37                        | 37                      | 1.80                          | 1.80                        | 0                         |              |
| GP22-13                               | 0.00241                                  |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP23-13                               | -0.00285                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP24A-13                              | -0.00408                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP24B-13                              | -0.00619                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP25-18                               | -0.00025 to 0.00029                      | 3.70                     | 0         | 1.60                    | 64                        | 61                      | 3.20                          | 3.00                        | 0                         |              |
| GP26-18                               | 0.0207                                   | 10.10                    | 0         | 0.00                    | 41                        | 40                      | 2.00                          | 2.00                        | 0                         |              |
| GP27-18                               | 0.00130                                  |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP28-18                               | 0.00625                                  | 4.80                     | 0         | 0.10                    | 97                        | 96                      | 4.70                          | 4.60                        | 0                         |              |
| GP29-18                               | 0.01073                                  |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP30-18                               | -0.00037                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP31-18                               | -0.00707                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP32-18                               | 0.209                                    |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP33-18                               | -0.0146                                  |                          |           |                         |                           |                         |                               |                             |                           |              |
| GP34-18                               | 0.00442                                  |                          |           |                         |                           |                         |                               |                             |                           |              |
| USEPA GP-1 North                      | 0.00013 to -0.00133                      |                          |           |                         |                           |                         |                               |                             |                           |              |
| USEPA GP-1 Middle                     | -0.00356                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| USEPA GP-1 South                      | -0.0212                                  |                          |           |                         |                           |                         |                               |                             |                           |              |
| USEPA GP-2                            | Excluded from Field Parameter Monitoring |                          |           |                         |                           |                         |                               |                             |                           |              |
| USEPA GP-3 North                      | -0.1407                                  | 5.20                     | 0         | 11.30                   | 0                         | n/a                     | 0.00                          | n/a                         | 0                         |              |
| USEPA GP-3 SW                         | -0.00131                                 | 3.80                     | 0         | 14.70                   | 0                         | n/a                     | 0.00                          | n/a                         | 0                         |              |
| USEPA GP-3 SE                         | 0.00348 to -0.00257                      |                          |           |                         |                           |                         |                               |                             |                           |              |
| Insufficient flow to collect readings |  |                          |           |                         |                           |                         |                               |                             |                           |              |
| USEPA GP-4 North                      | 0.00245 to -0.00017                      |                          |           |                         |                           |                         |                               |                             |                           |              |
| USEPA GP-4 Middle                     | -0.422                                   |                          |           |                         |                           |                         |                               |                             |                           |              |
| USEPA GP-4 South                      | -0.00352                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| USEPA GP-5 North                      | 0.00912                                  |                          |           |                         |                           |                         |                               |                             |                           |              |
| USEPA GP-5 South                      |  |                          |           |                         |                           |                         |                               |                             |                           |              |
| USEPA GP-6 North                      | -0.00225                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| USEPA GP-6 Middle                     | 0.00046 to -0.00177                      |                          |           |                         |                           |                         |                               |                             |                           |              |
| USEPA GP-6 South                      | -0.00317                                 |                          |           |                         |                           |                         |                               |                             |                           |              |
| USEPA GP-7 West                       | -0.00148                                 | 8.00                     | 0         | 9.60                    | 0                         | n/a                     | 0.00                          | n/a                         | 0                         |              |
| USEPA GP-7 Middle                     | 0.00022                                  | 8.20                     | 0         | 9.90                    | 0                         | n/a                     | 0.00                          | n/a                         | 0                         |              |
| USEPA GP-7 East                       | -0.00078 to 0.00125                      | 6.20                     | 0         | 12.20                   | 0                         | n/a                     | 0.00                          | n/a                         | 0                         |              |

[1] - North American Datum of 1983 (NAD83), U.S. Survey feet

9/4/18-9/5/18

Barometric Pressure

29.38-29.42" Hg

CO<sub>2</sub> Carbon DioxideO<sub>2</sub> Oxygen

LEL Lower Explosive Limit

H<sub>2</sub>S Hydrogen Sulfide

VOC Volatile Organic Compounds

BTOR Below Top of Riser

% v/v Percent by Volume

in WC Inches Water Column

Table 3

Page 1 of 1

**Soil Gas Probes - Field Parameters - November 2018**  
**South Dayton Dump Landfill**  
**Moraine, Ohio**

| Location          | Field Parameters    |                          |           |                         |  |                         |                               |                             |                           |              |
|-------------------|---------------------|--------------------------|-----------|-------------------------|--|-------------------------|-------------------------------|-----------------------------|---------------------------|--------------|
|                   | Pressure<br>(in WC) | CO <sub>2</sub><br>% v/v | CO<br>ppm | O <sub>2</sub><br>% v/v | LEL (Unfiltered)<br>% v/v  | LEL (Filtered)<br>% v/v | Methane (Unfiltered)<br>% v/v | Methane (Filtered)<br>% v/v | H <sub>2</sub> S<br>(ppm) | VOC<br>(ppm) |
| GP01-18           | -0.00230            | 12.2                     | 0         | 0.0                     | >100   | >100                    | 27.6                          | 27.1                        | 0                         | 0.0          |
| GP02-09           | -0.0217             | 14.2                     | 0         | 0.8                     | >100   | >100                    | 17.3                          | 17.1                        | 0                         | 0.0          |
| GP03-09           | 0.00314             |                          |           |                         | Insufficient flow to collect readings, probe appear to be flooded  |                         |                               |                             |                           |              |
| GP04-09           | -0.0120             | 0.0                      | 0         | 21.4                    | 3  | 14                      | 0.1                           | 0.7                         | 0                         | 0.0          |
| GP05-09           | 0.00700             | 6.7                      | 0         | 11.5                    | 3  | 3                       | 0.1                           | 0.1                         | 0                         | 0.1          |
| GP06-09           | -0.00375            | 2.3                      | 0         | 15.7                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 0.0          |
| GP07-18           | 0.00562             | 13.4                     | 5         | 0.0                     | >100   | 4                       | 5.2                           | 0.2                         | 3                         | 55.8         |
| GP08-09           | -0.00601            |                          |           |                         | Insufficient flow to collect readings                              |                         |                               |                             |                           |              |
| GP09-09           |                     |                          |           |                         | Inaccessible, covered by wood pile                                 |                         |                               |                             |                           |              |
| GP10-09           | -0.01253            | 4.0                      | 0         | 0.0                     | 5  | 5                       | 0.2                           | 0.2                         | 0                         | 25.4         |
| GP11-09           | -0.00577            | 4.2                      | 0         | 16.2                    | 3  | 3                       | 0.1                           | 0.1                         | 0                         | 0.3          |
| GP12-09           | -0.00388            | 0.3                      | 0         | 20.9                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 0.7          |
| GP13-09           | 0.0215              | 12.2                     | 0         | 1.6                     | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 0.0          |
| GP14-09           | 0.00134             | 2.3                      | 0         | 18.7                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 0.0          |
| GP15-09           | 0.01163             | 7.4                      | 0         | 11.5                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 0.0          |
| GP16-09           | 0.0278              | 8.8                      | 0         | 0.0                     | 29   | 29                      | 1.4                           | 1.4                         | 0                         | 0.0          |
| GP19-18           | -0.0792             | 11.8                     | 0         | 0.0                     | 38   | 36                      | 1.9                           | 1.8                         | 1                         | 0.0          |
| GP20-18           | 0.0247              | 13.8                     | 0         | 0.5                     | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 0.0          |
| GP21-09           | 0.01913             | 0.5                      | 0         | 12.8                    | 32   | 42                      | 1.6                           | 2.1                         | 0                         | 0.0          |
| GP22-13           | -0.0320             | 12.2                     | 0         | 0.1                     | 2  | 2                       | 0.1                           | 0.1                         | 0                         | 1.4          |
| GP23-13           | -0.00931            | 9.9                      | 0         | 9.8                     | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 4.9          |
| GP24A-13          | -0.00320            | 13.9                     | 0         | 6.2                     | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 4.6          |
| GP24B-13          | -0.013459           | 6.3                      | 0         | 12.4                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 6.1          |
| GP25-18           | 0.00000             | 4.9                      | 0         | 2.3                     | 95   | 95                      | 4.7                           | 4.7                         | 4                         | 0.0          |
| GP26-18           | -0.0167             | 10.2                     | 0         | 1.1                     | 82   | 80                      | 4.1                           | 4.0                         | 0                         | 0.0          |
| GP27-18           | 0.00344             | 6.2                      | 0         | 0.9                     | 35   | 32                      | 1.7                           | 1.6                         | 0                         | 5.4          |
| GP28-18           | 0.00881             | 5.4                      | 0         | 0.9                     | >100   | >100                    | 6.5                           | 6.0                         | 1                         | 0.6          |
| GP29-18           | -0.01813            | 5.9                      | 0         | 1.9                     | 6  | 6                       | 0.3                           | 0.3                         | 0                         | 1.0          |
| GP30-18           | 0.00000             | 0.0                      | 0         | 21.1                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 0.4          |
| GP31-18           | -0.00169            | 0.0                      | 0         | 21.3                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 7.7          |
| GP32-18           | -0.01732            | 14.9                     | 0         | 4.9                     | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 0.0          |
| GP33-18           | 0.00124             | 15.2                     | 0         | 0.4                     | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 0.0          |
| GP34-18           | -6.80               | 9.4                      | 0         | 9.5                     | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 4.8          |
| USEPA GP-1 North  | -0.1290             |                          |           |                         | Insufficient flow to collect readings                              |                         |                               |                             |                           |              |
| USEPA GP-1 Middle | -0.0346             | 1.6                      | 0         | 20.0                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 25.0         |
| USEPA GP-1 South  | -3.18               | 3.7                      | 0         | 17.6                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 18.5         |
| USEPA GP-2        |                     |                          |           |                         | Excluded from Field Parameter Monitoring                           |                         |                               |                             |                           |              |
| USEPA GP-3 North  | -0.268              | 4.2                      | 0         | 15.0                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 3.0          |
| USEPA GP-3 SW     | 0.0788              | 2.2                      | 0         | 18.5                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 3.8          |
| USEPA GP-3 SE     | -0.00453            |                          |           |                         | Insufficient flow to collect readings                              |                         |                               |                             |                           |              |
| USEPA GP-4 North  | 0.0141              | 5.8                      | 0         | 10.4                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 0.0          |
| USEPA GP-4 Middle | -0.540              | 6.1                      | 0         | 11.0                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 0.0          |
| USEPA GP-4 South  | 0.00098             | 6.1                      | 0         | 10.3                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 0.0          |
| USEPA GP-5 North  | 0.00284             | 6.8                      | 0         | 7.7                     | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 0.0          |
| USEPA GP-5 South  | -0.00136            | 6.3                      | 0         | 7.9                     | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 0.0          |
| USEPA GP-6 North  |                     |                          |           |                         | Soil gas probe could not be found due to vegetation, snow and ice. |                         |                               |                             |                           |              |
| USEPA GP-6 Middle |                     |                          |           |                         |  |                         |                               |                             |                           |              |
| USEPA GP-6 South  |                     |                          |           |                         |  |                         |                               |                             |                           |              |
| USEPA GP-7 West   | -0.00255            | 6.6                      | 0         | 15.1                    | 0  | 0                       | 0.0                           | 0.0                         | 4.3                       | 0.0          |
| USEPA GP-7 Middle | -0.0073             | 4.3                      | 0         | 17.5                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 5.2          |
| USEPA GP-7 East   | 0.0198              | 4.3                      | 0         | 17.4                    | 0  | 0                       | 0.0                           | 0.0                         | 0                         | 6.2          |

[1] - North American Datum of 1983 (NAD83), U.S. Survey feet

11/12/18 - 11/14/18

Barometric Pressure

30.01"-30.55" Hg

CO<sub>2</sub> Carbon Dioxide  
 O<sub>2</sub> Oxygen  
 LEL Lower Explosive Limit  
 H<sub>2</sub>S Hydrogen Sulfide  
 VOC Volatile Organic Compounds  
 BTOR Below Top of Riser  
 % v/v Percent by Volume  
 in WC Inches Water Column